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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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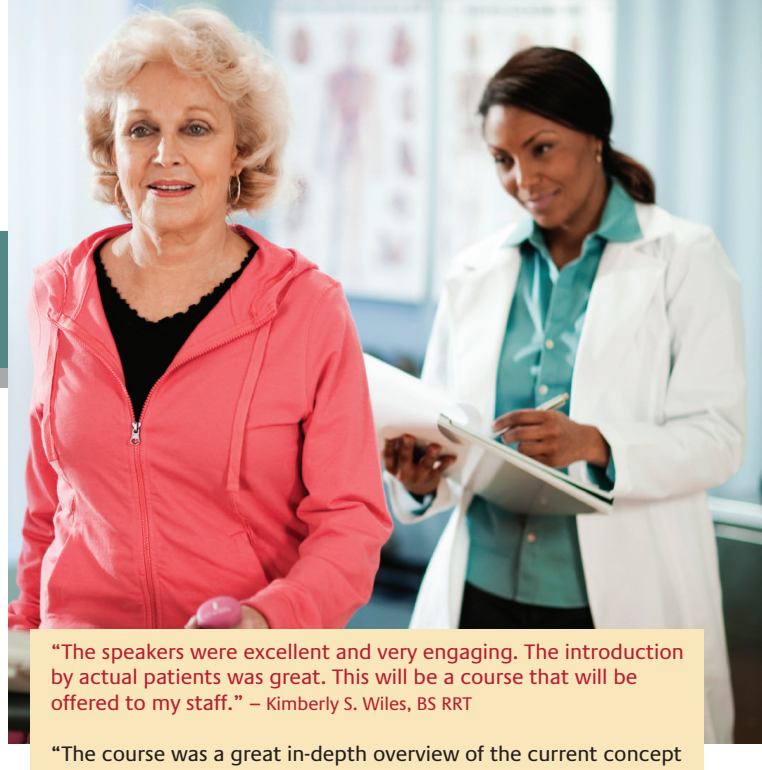

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FOCUS ON

Allergies & Asthma

Cost-effectiveness of the Respiratory Therapist in Asthma Education

by Tim W. Gilmore, MHS, RRT-NPS, CPFT, AE-C, and Dennis R. Wissing, PhD, RRT, AE-C, FAARC

The cost burden of asthma significantly impacts the total cost of health care in the United States. With more than 20 million people suffering with asthma, the number of emergency department (ED) visits, hospitalizations, and lost school and work days result in asthma being one of the most costly single diseases facing us today.[1] With such costs associated with asthma, it is pivotal that respiratory therapists play a significant role to reduce costs of asthma care.

The National Asthma Education and Prevention Program's "Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma" includes four components of care for the patient with asthma, including education for partnership in asthma care.[2] The respiratory therapist must become a partner with the patient to optimize outcomes.

Comprehensive asthma management that includes a number of disciplines has proven effective in containing costs of asthma care. The largest portion of the asthma-associated costs is for hospitalization.[1,3] Castro and colleagues reported a significant reduction in readmissions for a group of patients with asthma that received a brief education session while hospitalized.[4] Shelledy and colleagues also reported a reduction in hospitalizations, in-patient days, cost, and improvement in asthma symptoms following an in-home asthma management program (AMP). It was found that patients receiving education from either a nurse or RT saw a significant reduction in overall health care costs. Additional outcomes of this study showed patients in the AMP groups reported higher scores on quality of life surveys, improved functional capacity, and general health.[5] Another study evaluated providing asthma education by a trained asthma educator at the time of ED discharge and reported it to be effective with children by reducing subsequent ED visits.[6] The effects of a pediatric in-home AMP was found to have significant reductions in hospitalizations, ICU and non-ICU days, ED visits, school days missed, and overall health care costs. The program reduced the average costs per patient by more than $8,000 per year.[5]

According to Karen Meyerson, MSN, RN, FNP-C, AE-C, manager of The Asthma Network of West Michigan (ANWM), "a home-based care delivery model relies on collaboration across the care team. Assessments involve the home visitor — a nurse or respiratory therapist, medical social worker, and family. In our coalition, respiratory therapists, who are certified asthma educators, provide the same comprehensive care management services as do nurses." Meyerson reported an overall reduction in costs associated with asthma once the patient partnered with the ANWM.

Medications administered

While hospitalization is a significant factor in the cost of asthma, the primary treatment strategy for asthma is inhaled medicated aerosol,

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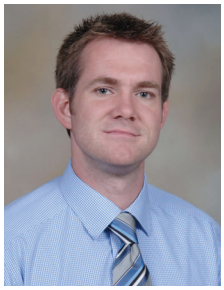

Tim W. Gilmore, MHS, RRT-NPS, CPFT, AE-C, is director of clinical education in the cardiopulmonary science program at LSU Health Sciences Center in Shreveport, LA.

Dennis R. Wissing, PhD, RRT, AE-C, FAARC, is professor of medicine and cardiopulmonary science and assistant dean for academic affairs at LSU Health Sciences Center in Shreveport, LA.

which is the second most costly factor for patients with asthma. Unfortunately, incorrect use of inhalation devices by patients or poor instruction by health care providers has been a reality for decades.[7] Misuse of inhaled drug therapy and delivery devices may result in higher costs of asthma management and poor outcomes in terms of treatment goals.[8] Although the percentage varies from study to study, approximately 50–60% of patients incorrectly use their inhalation devices.[7,9] Furthermore, patient instruction from health care providers is often inadequate or non-existent. Several studies report up to 80% of physicians do not know the proper procedure for correctly using a metered-dose inhaler (MDI), and 50–60% of nurses and pharmacists cannot demonstrate the correct procedure. The RT demonstrates the highest rate of correct use of MDI therapy.[7,9]

Up to 80% of physicians do not know the proper procedure for correctly using a metered-dose inhaler (MDI), and 50–60% of nurses and pharmacists cannot demonstrate the correct procedure.

Bedside education

Simple bedside instructions for patients with asthma can result in improved long-term outcomes. Song and colleagues reported on the effects of RTs instructing hospitalized patients with asthma on the correct use of MDI with holding chambers. Results showed, following RT instruction, patients demonstrated fewer errors in technique, complied with using a holding chamber, and experienced better symptom control.[8] Better deposition of medicated aerosol will result in better asthma control and less cost; thus, patient education is vital when MDI or powdered inhalers are prescribed.

The respiratory therapist providing care in an outpatient or in-patient setting encounters many "teachable moments" with patients receiving inhaled therapy. Reinforcing correct technique and having the patient "teach back" to assess their understanding should be routine for all RTs. With the transition from hand-held nebulizer therapy to MDI as a predominant form of delivery, RTs need to engage each patient with proper instruction and on-going assessment.

Asthma Education Certification

One opportunity for RTs to show competency in asthma education is to become a certified asthma educator by passing an examination offered by the National Asthma Education Certification Board. (The AARC offers an online course for those preparing for this test, available at www.AARC.org/education/asthma_course/.) Certification provides a standardized method to assure each asthma educator has extensive education and knowledge to counsel patients about asthma management. Certification in asthma education ensures that the asthma educator is using evidence-based disease management strategies.[10]

The care of the patient with asthma by a respiratory therapist will have a direct impact on the cost of asthma care. RTs must be diligent in keeping current with what is effective in the care of their asthma patients. As a profession of patient educators dealing with a variety of pulmonary diseases, it remains of utmost importance that RTs be constantly aware of our patients' changing needs. We are given immense opportunity to impact the lives of our patients, one education session at a time. ■

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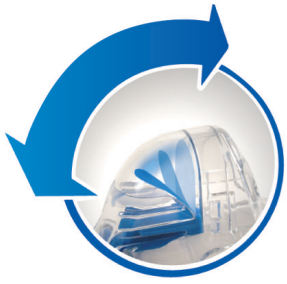

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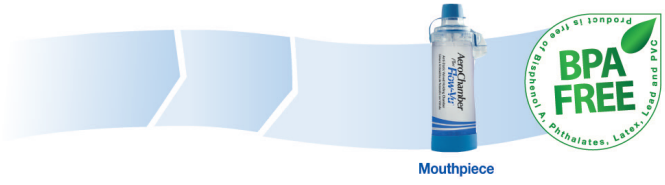

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Titrating Oxygen and Positive Pressure: Practical Considerations for the Respiratory Therapist

by Cheryl A. Hoerr, MBA, RRT, CPFT, FAARC

As respiratory therapy has grown and matured through the years, our professional knowledge and skills have expanded to include complex therapies that could hardly be imagined even a few decades ago. And while oxygen therapy continues to comprise a large volume of our offered services, the push to minimize the use of invasive mechanical ventilation as well as a growing awareness of the prevalence of sleep-disordered breathing has propelled positive airway pressure (PAP) therapy into another high-volume treatment for our patient populations. Unfortunately, as the saying goes, familiarity breeds contempt; and the routine use of both oxygen and PAP therapy can contribute to complacency on the part of the respiratory therapist when it comes to titrating the support offered by these modalities.

High-tech versus high-touch

Titration of either oxygen or PAP is more than simply walking into a patient's room and turning a knob on a piece of equipment. Successful titration requires a multi-layered approach that should address both the "high-tech" and the "high-touch" aspects of our profession. The high-tech aspect (i.e., the equipment and supplies used to administer the ordered therapy) includes both the capabilities and the limitations of that equipment. The high-touch component includes all other aspects of the titration process, including the goals of the therapy, the knowledge and skill level of the therapist attempting the titration, the patient's clinical status, the titration process itself, interdisciplinary communication, and patient and family involvement in the care process. In order to achieve an optimal therapeutic effect, respiratory therapists must achieve a balance between the use of both the high-tech and high-touch components.

about the author...

Cheryl A. Hoerr, MBA, RRT, CPFT, FAARC, is director of respiratory and sleep services at Phelps County Regional Medical Center in Rolla, MO. She is also a member of the AARC Program Committee.

Equipment considerations

Pulse oximeters are now considered an essential component in the RT's equipment arsenal. But not every oximeter can be successfully used in every situation, and proficient RTs need to be familiar with the available options. For example, small finger-tip oximeters may work quite well on relatively healthy subjects with normal circulatory status, but a model with advanced signal extraction technology may yield more accurate results when used with circulation-compromised patients. RTs also need to understand how their choice of equipment works in their particular environment: A pulse oximeter may work appropriately at moderate altitudes but may exhibit increasing variability at higher altitudes.[1] Additionally, the choice of probe selected (permanent, disposable, finger, forehead, ear, etc.) can make a significant difference in the ability to obtain an accurate reading. Transcutaneous devices have been less readily adopted and require conscientious attention to calibration to ensure accurate readings, which may limit their use in routine clinical situations.

Dizzying arrays of PAP options are available these days to facilitate customized treatment for a wide variety of patients. With the increasing popularity of the auto-titrating PAP (APAP) device, some RTs feel that routine titration of PAP in the inpatient setting will soon be a thing of the past. However, despite the increasing popularity of APAP, only 4% of devices ordered are APAP and 30% of physicians have never prescribed

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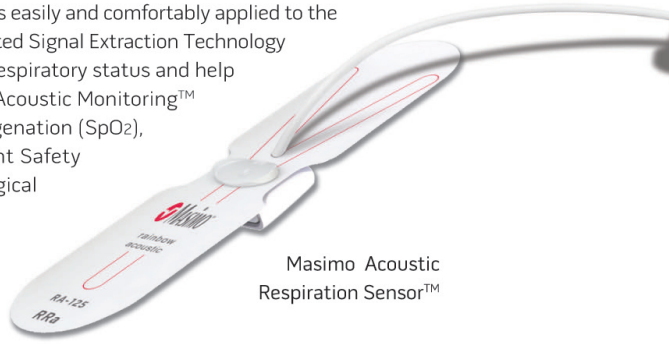

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APAP.[2] Respiratory therapists will continue to need a thorough understanding of the way other different types of PAP devices work in order to achieve a therapeutic level of treatment. Even if a facility has implemented the use of APAP machines to treat their patients, their staff need to understand that different APAP generators may deliver a significantly lower airway pressure than traditional continuous positive airway pressure generators,[3] thus limiting the patient population in which APAP can be successfully used. Bill Pruitt, MBA, RRT, CPFT, a senior instructor in the department of cardiorespiratory sciences at the University of South Alabama, put it best when he stated: "As devices get more and more sophisticated, the education and skill of the team to match the proper technology with the patient and titrate it properly become more critical in determining compliance."[4]

> Successful titration requires a multi-layered approach that should address both the "high-tech" and the "high-touch" aspects of our profession.

Where are we going?

As Yogi Berra stated so succinctly, "If you don't know where you are going, you might wind up someplace else." The same philosophy can apply to titration of both oxygen and pressure on a patient: If you don't have a clear understanding of what you are trying to accomplish, how do you know when you've achieved it? Are you titrating pressure to relieve apneas, or are you trying to correct desaturations? Are you titrating oxygen for ambulation or for comfort care? Will the patient be continuing the therapy at home, or is the therapy being used to support the patient until other therapies can be implemented and have time to work? The RT and health care team need to be in close communication in order to coordinate the right care for the patient's clinical condition. RTs should be familiar with the patient's clinical status and perform a thorough assessment before beginning any titration to ensure patient safety. Thorough communication will help ensure proper treatment.

Many departments have implemented oxygen and PAP titration protocols using evidence-based guidelines, and a well-designed protocol provides structured guidance for the titration process. The best protocols are tailored appropriately for specific patient populations and are flexible enough to allow appropriate treatment in a variety of situations. However, departments must ensure that protocols are kept current with the latest evidence available. For example, many PAP protocols do not address sedation, but there is evidence that providing minimal sedation can improve patient compliance with PAP titration.[5] And while the protocol provides a framework for the titration process, it is no substitute for the rigorous clinical judgment of the respiratory therapist. The RT must understand the potential outcomes of the titration process on the patient's clinical status and use good assessment skills to monitor the patient's response to every level of the titration. In one particular incident, a therapist strictly followed the hospital's oxygen titration protocol and significantly increased oxygen flow rates when a patient was desaturating. Despite following the protocol, poor clinical judgment was demonstrated because the therapist did not review the medical record before beginning the titration process and did not adequately assess the patient throughout the titration process. As a result of the patient's underlying condition, the therapist contributed to the patient's respiratory failure, and the patient ended up intubated on a mechanical ventilator.

Gaining the patient's cooperation

Finally, the key to a successful titration is keeping the patient engaged in their care process. This involves gaining the patient's trust by demonstrating competence and establishing an effective rapport. According to Dr. Barry Krakow, medical director at Maimonides Sleep Arts & Sciences LTD, "Patients trust you faster when they see or feel two things… they perceive you are competent and confident in what you do… and they feel that you are sincerely trying to help them."[6] Trust allows respiratory therapists to engage the patient, making communication more effective and allowing the titration to be accomplished more effectively.

Effective titration involves a multi-layered approach that combines the RT's knowledge, skills, competence, and caring to ensure the optimal therapeutic level of treatment. ■

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Geriatrics: Teamwork in Communication

by Helen M. Sorenson, MA, RRT, FAARC

Teamwork is a good thing. Few, if any, would deny the benefits of working together toward a common goal. In health care, however, we all too often operate under the "division of labor model" — each profession having their own role and hoping that somehow, in the end, the patient will benefit. A quotation by Anäis Nin, "we don't see things as they are, we see things as we are," can easily be translated into "health care professionals see the world as they are, not as it is." We understand the patient's need to sleep; yet when their sleep interferes with the need to do a procedure, we win. We know that without adequate nutrition patients will lack the strength to improve, yet we cringe when breakfast trays are delivered before the first round of therapy is completed and complain when patients (especially the elderly) take too long to eat, thus altering our carefully planned daily schedule. As a team, perhaps seeing the patients' world "as it is" would be better — but how can this be accomplished?

Seeing our patients' world as it is

Cole and Cole, in the April 2009 edition of *Communication World*, would have us see the correct spelling of teamwork as C-O-M-M-U-N-I-C-A-T-I-O-N. Although designed for businesses, their model of teamwork/communication advocates for:

- Understanding what is needed from each other
- Allowing people to use their specialized knowledge and competence
- Being kept informed with necessary facts and information
- Voluntarily doing that which you know needs to be done
- Being dependable, doing completely what you agreed to do
- Keeping confidential information confidential.[1]

As health care professionals/employees, we are a team out of necessity. Physicians, nurses, therapists, dieticians, administrators, housekeeping, billing clerks, admissions staff, and security officers, just to name a few, all show up for work every day. Hospitals cannot operate without any of these key personnel. The tricky part is all working together for a common goal: the health and well-being of the patient.

Neonatal and geriatric patients are, perhaps, the most vulnerable populations when it comes to the need for coordinated care. Neonates are incapable of caring for themselves; they rely completely on the expertise of those around them. Older adults, although capable of self-care, often have multiple chronic conditions coupled with comorbidities and acute exacerbations, complicating their overall care. Good communication and teamwork are hallmarks of quality care for any population, but these take on added importance in geriatric medicine. The diversity of older adult patients adds to the challenge. To say that "all older adults" do or are anything is a misrepresentation. Their life experiences, exposure to different situations, wear and tear on their bodies, personality differences, combined with age-related, genetic, and disease-related abnormalities, make them all unique individuals.

Communication and teamwork in medicine can be separated into two different but equally important constructs: communication with the patient and communi-

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cation about the patient. Lack of either can result in suboptimal care.

Communicating with the patient

William H. Thomas, in a book called "Life Worth Living," explains that three plagues — loneliness, helplessness, and boredom — were what prompted him to create The Eden Alternative.[2] Lack of communication can be equally distressing to older adults. Attending to their basic needs of food, water, cleanliness, and comfort, but without any purposeful communication, can create a damaging type of loneliness and isolation. Geriatric patients in acute care hospitals are surrounded by activity and a steady stream of different faces, which vicariously keeps them involved to a certain degree. Other than their diagnosis, however, what do we know about them? Older adults in long-term care may see nurses, aides, and therapists, but on a more limited basis and in a quieter environment. Going back to Cole's model of teamwork/communication, ("*understanding what is needed from each other*"), do we as caregivers need the personal connection as much as they do?

Numerous studies have demonstrated the importance of communicating with the elderly.[3,4] Several studies have indicated that the lack of communication is the largest source of discontent in patients. What may seem to be a complicated issue, given the current time constraints in health care institutions, can be reduced to simplicity ("*voluntarily doing that which you know needs to be done*"). A smile, a word of encouragement, a simple "what are the plans for today" will give an older patient something to think about, something to respond to, and a validation that their existence matters to someone.

Communicating about the patient

Hospitalized and/or institutionalized patients are not treated by single individuals. Care is provided by a multitude of trained health care professionals, each with their own specialty. Effective and timely communication among these specialists is essential for safe patient care. Failure to communicate new data, lab values, new symptoms, and/or adverse drug reactions can have serious consequences. "*Being kept informed with necessary facts and information,*" according to Cole, is a third component of teamwork/communication. Lack of communication has been implicated as a common cause of inadvertent patient harm. In many workplace environments, effective teamwork and communication are advocated for and maybe even assumed, yet little formal education and "how-to" training is provided. All too often the basics of being kept informed with important information gets lost in the busyness of the day.

In an article by Leonard et al, entitled "The Human Factor," the critical importance that teamwork and communication play in providing safe care is discussed.[5] Given the unwritten hierarchy in hospitals, it is not always comfortable communicating "up the ladder." Limitations caused by the human factor can thus hinder effective

A smile, a word of encouragement, a simple "what are the plans for today" will give an older patient something to think about, something to respond to, and a validation that their existence matters to someone.

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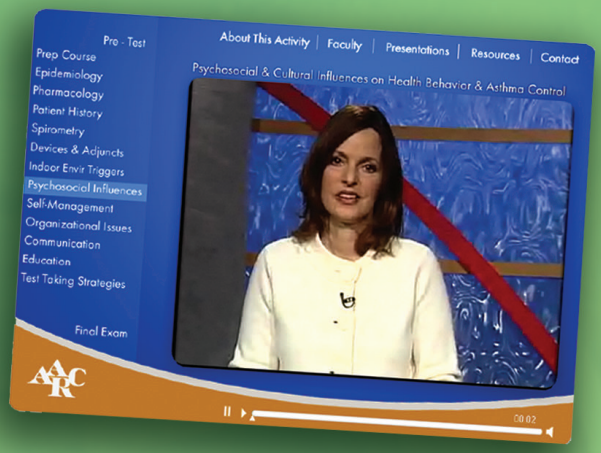

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transfer of information. Leonard states that there is a critical need for standardized communication tools. The creation of an environment in which all individuals feel free to transfer evidence about unsafe situations is also critical. Unfortunately, in many instances, personalities may become barriers to effective communication.

Communication training

One potential solution has been the novel incorporation of crew resource management (CRM), originally developed by the aviation industry more than 25 years ago. CRM was instituted when it was discovered that 70% of commercial flight accidents resulted from poor communication. A study in 2003 involved 489 clinical teams composed of nurses, technicians, physicians, and administrators who underwent an eight-hour CRM training course. The six CRM areas emphasized were managing fatigue, creating and managing teams, recognizing adverse situations (red flags), cross-checking/communication, decision-making, and performance feedback. The End-of-Course Critique revealed that 95% of the medical respondents agreed that CRM training would reduce errors in their practice.[6]

Translated to geriatric care, there are many red flags that should prompt attention and/or action by caregivers. Syncope, new-onset confusion, and abdominal pain in the elderly almost always signal pathology of some kind. If communication between aides, technicians, nurses, and physicians is not effective, for whatever reasons, patients may die. One of the barriers to effective health care communication is the fact that training occurs in separate disciplines. Team members often receive little or no actual team training, which can result in authority and autonomy discord. One very positive result of the CRM training for health care professionals was revealed by the pre/post Human Factor Attitude Survey (HFAS) given to all participants. After the eight-hour training session, respondents on the HFAS showed a significant improvement in attitude, believing that team members should "speak up" if they see something wrong. This ties in with the premise that *"allowing people to use their specialized knowledge"* is imperative in teamwork/communication. After the training, participants also indicated a more positive attitude toward new skills acquired, such as recognizing "red flags" and conducting systematic pre- and post-case briefings. While the brief training session opened the eyes of the participants, most expressed reservations that the CRM would actually transform their work practice. This finding underscores the need for more concentrated team training, including a culture of teamwork/communication, in an interdisciplinary fashion, early in health care training.

Most health care training programs are not flexible enough to add an additional 20–30 hours of teamwork training to their curricula, but awareness can facilitate action. Stressing the importance of effective communication — complete, clear, brief, and timely — can be an integral component of clinical practicums.

Putting yourself "in the patient's shoes" may be the best way for therapists and therapists-in-training to comprehend the impact of communication in any health care setting.

- As a patient you will want all your caregivers to see the big picture and to understand the common goal of caring for you.
- As a patient you will want to be informed about the plan of care and if the plan changes, to let you know.
- As a patient you will want dependable individuals to provide competent care and to treat you with respect.
- As a patient, you need to know that your personal information remains personal.

Interdisciplinary training with other health care professionals will create areas of understanding and facilitate cross-communication. All patients, including the frail elderly, will benefit. Thousands of people die each year in hospitals due to medical errors. We can and must do better. ■

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Ventilation for Life

Ventilator-weaning Protocols — Do They Help?

by Douglas S. Laher, MBA, RRT

It is a widely accepted premise in the critical care world that ventilator protocols are a scientifically validated methodology to effectively liberate patients from mechanical ventilation. As experts of the cardiovascular system and as non-physician caregivers, respiratory therapists are likely to believe that when armed with the autonomy to practice evidence-based weaning, they have the ability to improve outcomes and reduce ventilator days. Sufficient peer-reviewed literature exists that suggests exactly that.[1]

A protocol (defined by Merriam-Webster dictionary as a detailed plan of a medical or scientific experiment, treatment, or procedure[2]) is intended to draw the same conclusion or endpoint regardless of the caregiver who is following the protocol, assuming the same scientific conclusions and/or assessments are made by each clinician. Unfortunately, it is here where the reproducibility of protocols comes into question as it is unavoidable that humans will make mistakes, have lapses in judgment and assessment skills, or simply choose to waver from the protocol to instead go with a "gut" feeling. Therefore, the success and failure of protocols do not lie so much within the science of the protocol but instead may be influenced by the caregivers' adherence to following the protocol and their ability to compute multiple data points that draw to a singular and consistent conclusion. It is for these reasons that the most important aspect of successful protocol implementation is in the training and education of the physician and caregiver. After all, what good are protocols if they are either approved but not utilized, or utilized incorrectly and/or inconsistently?

about the author...

Douglas S. Laher, MBA, RRT, is a member of the AARC Board of Directors and serves as chair of the Management Section.

Evidence-based guidelines

Ventilator-weaning strategies have been researched for years. Perhaps the best review of this literature was recounted in the landmark article on "Evidence-based Guidelines for Weaning and Discontinuing Ventilatory Support," first published in CHEST in 2001 and reprinted in 2002 in Respiratory Care.[3,4] In this document, Recommendation 2 (a Grade B recommendation) states:

Patients receiving mechanical ventilation for respiratory failure should undergo a formal assessment of discontinuation potential if the following criteria are satisfied:

1. *Evidence for some reversal of the underlying cause of respiratory failure;*
2. *Adequate oxygenation (e.g., PaO_2/FIO_2 > 150-200; requiring positive end-expiratory pressure [PEEP] < or = 5–8 cm H_2O; FIO_2 < 0.4–0.5) and pH (e.g., > or = 7.25);*
3. *Hemodynamic stability as defined by the absence of active myocardial ischemia and the absence of clinically important hypotension (i.e., a condition requiring no vasopressor therapy or therapy with only low-dose vasopressors such as dopamine or dobutamine < 5 micro g/kg/min); and*
4. *The capability to initiate an inspiratory effort.*

The decision to use these criteria must be individualized. Some patients not satisfying all of the above the criteria (eg, patients with chronic hypoxemia below the thresholds cited) may be ready for attempts at discontinuation of mechanical ventilation.

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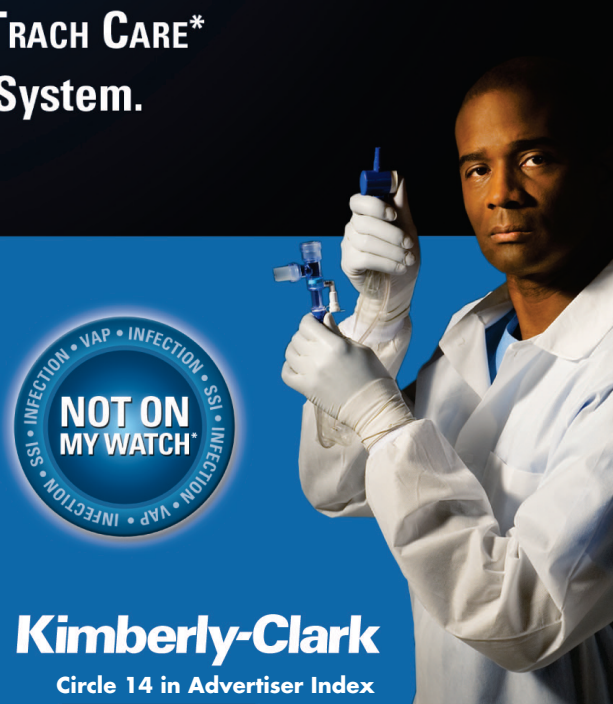

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In turn, Recommendation 3 (a Grade A recommendation) states that ventilatory discontinuation efforts should be performed with patients spontaneously breathing. Criteria to assess tolerance of spontaneous breathing trials (SBT) should include respiratory pattern, gas exchange, hemodynamic stability, and patient comfort. Tolerance of SBTs for a period of 30–120 minutes should prompt consideration for extubation.

These recommendations, coming as a result of the existing peer-reviewed literature, are intended to shorten the duration patients spend on mechanical ventilation. According to Esteban et al, roughly 42% of a patient's time spent on a ventilator is spent on the discontinuation process.[5] Thus it is postulated that having the ability to significantly shorten the discontinuation phase of mechanical ventilation will provide the "biggest bang for the buck" of reducing overall ventilator days.

More research should be conducted with ventilator protocols, for it is statistically significant evidence that will drive the implementation and utilization of protocols in the ICU.

Ultimately however, the primary goal for the evidence-based treatment provided to patients is not to simply reduce ventilator days but to shorten ICU and hospital length of stay, improve outcomes, and impact other key performance metrics such as recidivism and mortality. While one such study by Jiang et al found that ventilator management had positive impacts on quality in the ICU (total ventilator days [p = 0.014] were correlative to mortality, ventilatory management with ICU length of stay [p = 0.038], and ventilator weaning with nosocomial events [p = 0.010]),[6] it was not included in the CHEST article.[3]

Furthermore, as Chatburn highlighted in his paper "Should Weaning Protocols Be Used with All Patients Who Receive Mechanical Ventilation?," while the task force's Grade A recommendation was scientifically based, the clinical impact on other key quality indicators is less clear.[7] In Ely's landmark paper it is stated that while median wean time was reduced by two days and liberation from the ventilator was reduced by 1.5 days, other meaningful outcomes such as ICU stay, hospital stay, hospital costs, and mortality were unaffected by the weaning protocol.[8] While we know through randomized controlled trials that ventilator-weaning protocols reduce wean time and ventilator days, it is less clear what their impact is on overall quality of care. Therefore, more research should be conducted with ventilator protocols, for it is statistically significant evidence that will drive the implementation and utilization of protocols in the ICU. If the data suggests otherwise, then they may never be considered as anything more than "cookbook medicine."

Ventilator-weaning protocol effectiveness

Most important however, if ventilator-weaning protocols are to be effective, they must be utilized consistently and without variation. Some of these issues have already been addressed through the advent of new technology. Ventilators with closed-loop modes allow for continuous, uninterrupted management of the patient with the ability to make real-time changes in response to the patient's needs. Unlike their human counterparts, these closed-loop machines do not sleep, go on break, or step away from the bedside for shift report. They are also meticulously committed to adhering to the programmed software installed into the ventilator — without variation. As such, this technology and functionality should not be discarded as an option to ventilatory management. If we are to accept the premise that ventilator-weaning protocols are effective at improving outcomes in the ICU, then it is also important to acknowledge that the protocols are only as effective as the clinician enacting it.

While some RTs fear this closed-loop technology is a means to their extinction from the bedside, one must not forget that this selfish thinking slows innovation; and it is innovation that provides better care to patients. RTs must look at closed-loop ventilation as an adjunct to the care they provide — not a replacement. After all, there still must be RTs to assess patients, view waveforms, make diagnostic interpretations, and simply hold the hand of a sick patient and reassure them that all will be OK. If RTs continue to show their value in the form of conducting research and improving clinical outcomes, then hospital administrators, when making value-based purchasing decisions, will most certainly keep respiratory therapists as key and integral members of the health care team.

Research opportunity

In closing, if one were to identify that minimizing days spent on mechanical ventilation is a goal of mechanical ventilation, then ventilator-weaning protocols are a proven mechanism to do just that. In looking at the

bigger picture, however, one must not look at mechanical ventilation in a vacuum. This short-sighted thinking may have little impact on the overall well-being of the patient, the hospital, and the health care system as a whole. Instead, the goal of weaning protocols and their impact on mechanical ventilation should be focused on improving the overall clinical experience for the patient and the outcomes associated with the patient's ICU and hospital stay. Therefore, it is imperative that research be continued in this area. For those who feel that the evidence is already clear and that the outcomes of weaning protocols are favorable, I would challenge you with this quote from an unidentified researcher: "If Christopher Columbus believed in the evidence that the world was flat, he would have never discovered America." ■

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For Whom the Board Tolls

by Anthony L. DeWitt, JD, RRT, FAARC

Typically when clinicians get in trouble with their State Board of Respiratory Care, they do so in one or two predictable ways. The most common way is through a criminal charge and conviction, and the most common of criminal charges is a DUI/DWI offense. When a clinician gets arrested for a DUI/DWI, it usually does not trigger licensure action. However, if they get convicted of the crime and that conviction is entered on their record, it can cause the Board of Respiratory Care to take a look at their license. When there is a criminal conviction and the board seeks to impose discipline, the mere fact of the conviction is really all that's needed to sanction the therapist.

So, who needs a lawyer?

A lawyer can help mitigate the punishment and sometimes work out a better consent agreement with the board. But the first and best way to avoid this kind of licensure action is to not drink and drive in the first place.

Sometimes the mere arrest of a clinician on charges related to a sexual or drug-related offense is enough to get the board to ask a court for an immediate suspension of the license. If criminal charges wind through the courts for months or years, the clinician does not get to practice during that time. It makes it hard for the therapist to make a living, but it also protects the public. Clinicians who have been wrongly accused must balance their need for a license against their need to remain silent to avoid making damaging statements.

When a clinician is faced with a criminal complaint, a lawyer who practices criminal law is the first thing the clinician needs. A good administrative lawyer will be necessary for the licensure action, but that won't have much value if the clinician is convicted on the underlying crime.

The terminator and the terminatee

The other way that clinicians get to have a sit-down discussion with their peers on the board is when they are terminated from employment for a reason having to do with errors, mistakes, or malfeasance related to clinical patient care. Said another way, a clinician who gets fired because they're tardy or because they are insubordinate is not a clinician that comes up on the board's radar. But therapists who are fired because they showed up for patient care duties while under the influence of drugs or alcohol, or because they charted treatments on a patient after the patient was declared dead, will invite a visit from a board investigator.

No right to remain silent

Generally speaking, when a board investigator calls, most clinicians know why the investigator is calling; and their immediate reaction is to tell their side of the story, thinking that doing so will head off an investigation. All this really does is ensure that the board investigator will look more closely. You should never speak to an investigator alone.

Several years ago a former client fired an employee and the next day was raided by a state agency that found, in one particular location, evidence that made it look like the client had broken the law. His initial reaction was to tell the board investigator all about the employee he'd fired and how this was all a huge mistake. His actions made the case much more difficult to defend because investigators write down everything you say that hurts your case and somehow neglect to write down the things that help your case. For that reason, the far better approach is to let your lawyer do your talking for you. If the board investigator wants to talk, that conversation

about the author...

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should occur only with a lawyer present.

Protecting the public

The purpose of licensure is to protect the public from incompetent or dangerous practitioners. No state takes that duty more seriously than California, where therapist Efren Saldivar stained the reputations of thousands of clinicians when he pleaded guilty to killing as many as six patients at a Glendale, CA, facility. California's board posts its disciplinary issue on its website, and reading through the consent decrees and licensure actions is a sobering experience. In analyzing these reports, the thing that stands out is that the majority of licensure actions related to criminal convictions are based on three discrete kinds of criminal activities: substance abuse offenses (DUI, DWI, possession and sale of controlled substances, etc.), sexual offenses (child pornography, etc.) and domestic abuse offenses.

There is a good argument that the mere fact that someone drove in an impaired condition is not evidence of their unsuitability to practice respiratory care. However, the counterargument says that a clinician who cannot be trusted not to endanger lives on the roadways might not be trustworthy when lives are on the line in the hospital. Similarly, a clinician who strikes or assaults his spouse may be a terrific person around patients, but clearly they have anger-management issues that need to be addressed. The California board has laudably led the way in dealing with these kinds of issues.

It is worth noting, of course, that whenever a clinician is disciplined, the price is steep. The costs of the investigation and the costs of monitoring and treatment programs may be more punishment than the imposition of a licensure censure or suspension. Add to that the costs of legal representation, and it quickly becomes obvious that avoiding trouble in the first place is the smartest bet.

A question of competence

A harder problem exists when it comes to issues of competence and gross negligence. Mere inattention does not rise to the level of gross negligence. Gross negligence is a deviation from the standard of care that is egregious in nature. These include falsifying treatment data, claiming to have done procedures not done, and repeated failures to follow a physician's order. These are the kinds of misbehavior that can result in board sanctions. In one case in California, a clinician charted treatments on a patient who had died. In another, a therapist fell asleep while on duty in the neurological care unit and had to be awakened by supervisors. It was later discovered that while she was sleeping she claimed to have made ventilator checks and that the entries in the medical record were false. Another clinician simply refused to deliver medication that he charted he had delivered. In reading through the disciplinary accusations and orders, it's hard not to ascribe many of these cases to sheer laziness on the part of the therapists.

> The far better approach is to let your lawyer do your talking for you. If the board investigator wants to talk, that conversation should occur only with a lawyer present.

If called to appear before the board, either as a witness or a defendant, you should immediately obtain counsel. Professional liability insurance is available to clinicians, and many professional liability insurance plans provide coverage for licensure issues. Check with your insurer to determine if you have coverage for licensure issues. ■

North Dakota Initiative Creates State Tobacco Prevention and Advisory Committee

by Jay Taylor, RRT, TTS

You may recall that in 1998 the U.S. Congress enacted a law, the Tobacco Settlement Act, that required the big tobacco companies to pay state governments an estimated $246 billion over 25 years, doled out in annual increments. The settlement was intended to help states attack the enormous public health problems posed by tobacco use across the country.

In November 2008, the voters of North Dakota very wisely approved Measure 3, a ballot initiative that earmarked our state's additional share of the Tobacco Settlement money, a portion of which was used to establish The North Dakota Tobacco Prevention and Advisory Committee. The committee, utilizing the Centers for Disease Control and Prevention's "Best Practices for Comprehensive Tobacco Control Programs," in turn created the North Dakota State Plan to battle tobacco use and assist with tobacco-dependence treatment efforts. Part of this plan allowed for public health units across our state to apply for grants to provide services for North Dakota residents to help them quit smoking and using tobacco products altogether.

A significant portion of the Measure 3 money went to strengthen our state's already fine QuitLine service, a program coordinated by the State Department of Health's Cessation Program Director Michelle Walker, RRT, CTTS. The QuitLine service provides telephone counseling for tobacco users as well as two months of free nicotine replacement therapy (NRT) for the citizens of North Dakota who do not have access to counseling or NRT through their own insurance or through any other means. This was a great plan; but as people started hearing about it, the QuitLine became swamped with calls, much like the period of time following the increase in federal tobacco taxes, which also induced people to quit the tobacco addiction. At one point there was a two-week lag time between when the client called the QuitLine until the time they could start their counseling. There was an even longer lag time for the arrival of their NRT products.

Many of us who provide tobacco-dependence treatment know that when the time is right and motivation is present to quit smoking, a two to three week delay can serve to lower that person's desire and motivation and they might lose their incentive.

Under the guidance, grace, and intelligence of Tobacco Cessation Coordinator Chelsey Matter, RRT, CTTS, and Bette Deede, both from Fargo Cass Public Health, we developed a plan and partnership between MeritCare Medical Center's respiratory care services department, Innovis Health Pulmonary Lab, North Dakota State University Student Wellness Center, and our local Family Health Care Center Pharmacy to create and use a fax-referral system, signing up citizens who wanted access to the QuitLine in a more timely manner. The additional reward for these people was that places like MeritCare could immediately provide their clients with a two-week supply of NRT to help them continue their tobacco-dependence treatment, which may have begun in the hospital setting.

Never second-guess your patients

From the perspective of the MeritCare Tobacco Dependence Team (the respiratory therapy department), we assumed that this program would be a nice "little" addition to our service and that we would probably sign up

about the author...

Jay Taylor, RRT, TTS, is a respiratory therapist, tobacco dependence counselor, and asthma educator at MeritCare Hospital in Fargo, ND. He was also appointed by the North Dakota governor to the state's Tobacco Prevention and Advisory Committee.

about 10 people per month. Boy, were we wrong! Starting in late October and going through November 2009, we provided 27 fax referrals to the QuitLine. In December, we sent another 27; in January 2010, 48; in February, 44; in March, 59 — with no significant slow-down in sight. As with any "little program" that reaches out to help people with nicotine addiction, we seem to have created a monster. There's no sign that anything short of a flood will slow down this service.

This joint partnership is a powerful use of tobacco dollars coming into North Dakota as a result of the Tobacco Settlement Act. And patients are happy to hear that the tobacco companies are paying for their nicotine replacement therapy.

A powerful tool to fight big tobacco

Now, a fax referral and two weeks of free NRT doesn't necessarily mean that the client has joined the QuitLine or successfully quit tobacco use, but it's a huge step in the right direction. Reaching out and being a resource to help people with this problem is our real goal. We feel this joint partnership is a powerful use of tobacco dollars coming into North Dakota as a result of the Tobacco Settlement Act. Patients are happy to hear that, in effect, the tobacco companies are paying for their nicotine replacement therapy.

Using our new state plan, "Saving Lives — Saving Money: North Dakota's Comprehensive State Plan to Prevent and Reduce Tobacco Use: 2009–2014" would also include increasing the state excise tax on cigarettes to $2 per pack, working to ensure more communities are smoke free, eliminating the exposure to secondhand smoke, and educating and hopefully preventing kids from picking up the deadly tobacco addiction.

Starting your own program is something you can do

The fax referral system for the QuitLine that we utilize was developed by Chelsey Matter for the Fargo, ND, area and is a unique program. With a little or a lot of work, depending on where you are with your program, a service like this can help many tobacco users. As RTs, I urge you to step up and contact your local public health units and see what partnerships you can create.

If you have questions regarding how we did this, please feel free to e-mail the Tobacco Dependence Team at MeritCare Medical Center in Fargo (Jay.Taylor@MeritCare.com) or Chelsey Matter at Fargo Cass Public Health (CMatter@City0fFargo.com). ■

EDITOR'S NOTE

Jay Taylor is scheduled to present a symposium on how MeritCare started their tobacco treatment program on Wednesday, Dec. 8, during the AARC International Respiratory Congress in Las Vegas, NV.

Drive for Our Patients and Drive for RTs by Driving for COPD

by Sam P. Giordano, MBA, RRT, FAARC

I dare say you don't have to be in our profession very long before you wonder why respiratory therapists are not a household word among the public. The public is well aware of our valued colleagues in medicine and nursing, but respiratory therapists have remained in the shadows of public awareness far too long.

More and more RTs are recognized — usually because of what they've done to help their communities and their patients. But we need big-impact projects to break the gravitational pull of competition for the public's attention.

One of our best awareness achievements occurred a couple of decades ago when we went to all the major airports in the United States and conducted a survey regarding the attitudes of the flying public toward smoking on commercial airline flights. Remember that one? The results of that survey became the catalyst for the prohibition of smoking on commercial flights, and we were recognized on the floor of Congress for our contributions to this effort.

We made a contribution to public health, and we made the public aware of RTs. These opportunities don't come along very often, but when they do, there are three factors to consider:

1. We must advocate for the public's health.
2. We must have a vehicle that will permit us to interface with the general public, not just those with respiratory diseases.
3. We must all pitch in and volunteer our efforts to get the job done.

DRIVE4COPD

We now have another huge opportunity to help advance the cause of public health. As you know, there are approximately 12 million people in the United States who have COPD but don't know it. There are many millions of others who may be predisposed to COPD because of smoking, inhalation of biomass fuels, or genetic factors. If we ever hope to get a handle on our nation's health care expenses, we need to identify these people so they can undertake efforts to treat their disease (if they have it), to avoid risky behaviors and environments, and to know where they stand in terms of their lung health.

There's a new public health campaign called "DRIVE4COPD." This effort has enlisted celebrities Danica Patrick, Jim Belushi, Michael Strahan, Patty Loveless, and Bruce Jenner. All of these men and women have been affected by COPD through their experiences with members of their families. Boehringer-Ingelheim Pharmaceuticals Inc. is sponsoring the drive and has asked the AARC to be a partner along with the American Lung Association, US COPD Foundation, and NASCAR®.

The campaign consists of going out among the general public and asking persons who are 35 years old or older to complete a population screener survey. It consists of five questions from which the public can calculate their score. If they score a 5 or higher, they're encouraged to see their physician.

Race for the missing respiratory patients

AARC is putting a twist on this campaign. We are organizing a contest between our state societies, and your state society is going to need you to volunteer. We're not just going to state fairs or having additional activities during RC Week this fall. We want to blow this campaign away by getting half a million to complete the screeners by Thanksgiving.

about the author...

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

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According to the U.S. Census Bureau, there are approximately 160 million people in the USA who are 35 years or older. This means we can find them everywhere. We want to go to shopping centers, airports, and any place the public congregates. We can make return visits at these venues, so we don't have to go outside our communities to help. We want you to be there looking like the professionals you are and letting people know you're a respiratory therapist. You'll also be a human recruiting poster for our profession. There will be campaign materials to assist you and information that will make the public aware that they are receiving this survey from a respiratory therapist.

Many of you have answered the call before, and you've made a difference. DRIVE4COPD provides us with a huge opportunity to, first and foremost, advance the cause of public health — and also to increase awareness of our profession among the public at large. This increased awareness (especially in this economy) translates into more applicants for respiratory care education programs:

You will soon be contacted by your state society with more information on getting involved with DRIVE4COPD, or you can contact them. Find their Web links at www.AARC.org/links/links_affiliates.asp.

- The more applicants we get, the better the quality of our graduates.
- The more applicants we get, the better our ability to meet the clinical demands for respiratory patients.
- The more applicants we get, the more RTs we get; and our ability to meet increasing demands and ever-expanding roles will increase right along with our efforts.

Now is the time, RTs! I know you're all busy, but these opportunities don't come along every year. Let's answer the bell and help the public and our profession. ■

From left, Michael Strahan, Bruce Jenner, Patty Loveless, and Jim Belushi tell the drivers to "Start their Engines" prior to the NASCAR Nationwide Series Drive4COPD 300 at Daytona International Speedway on Feb. 13 in Daytona Beach, FL. (Photo by Geoff Burke/Getty Images for NASCAR)

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The RT's Role in the Treatment and Prevention of MRSA

by David R. Gibson, BS, RRT

There's no doubt, *Staphylococcus aureus* is "bad to the bone"… but I do not mean in the same sense George Thorogood does in his famous song. *S. aureus* is literally responsible for a large share of life-threatening osteomyelitis, one of the most common community-acquired *S. aureus* infections. Even more common than bone infection, however (at least in the hospital setting), is *S. aureus* pneumonia since this bacteria accounts for one out of every four cases of hospital-acquired respiratory infection. Nosocomial infections with *S. aureus* include skin infections (most common), lower respiratory tract infections (second most common), blood stream infections, and many other sites. These infections are, unfortunately, very common and carry a great economic cost, sometimes more than tripling patient length of stay.

Since the 1940s, millions of doses of antibiotics have been administered in the ongoing war with this leading cause of both community- and hospital-acquired infections. Not surprisingly, *S. aureus* fought back, and as early as the 1950s methicillin-resistant *Staphylococcus aureus* (MRSA) was first identified. Since that time, penicillinase producing strains of *S. aureus* (the most prevalent form of antibiotic-resistant *S. aureus*) has grown exponentially to a prevalence of 50% of all *S. aureus* infections.

Because MRSA has become so prevalent, health care workers do not need to be reminded that antibiotic resistance is responsible for not only increased cost and extended length of stay, but also increased mortality rates. The acronym MRSA illicits great concern among health care workers and is even increasingly mentioned in the mainstream press. (Increasingly, MRSA shows up in non-health care settings such as schools.) With all this attention, it is prudent for all departments within the hospital to address the spread of MRSA and evaluate whether their practices play a role in the spread of this bacteria.

Since nosocomial pneumonia with MRSA is so common, and because respiratory therapy is a "hands on" specialty, respiratory therapists are on the frontlines in the battle over the spread of this dreaded microorganism. The purpose of this article is to raise awareness of some of the key areas of concern regarding the treatment and prevention of MRSA and mention a few important practices that respiratory therapists can undertake.

Evaluate policies

Since MRSA is the most common resistant microorganism in the hospital setting, policies and procedures should be written with resistant *S. aureus* in mind. For example, when a patient is intubated, is there a policy that specifically states not to leave the naked endotracheal tube (ETT) under the pillow or in the bed until this tube is placed? Even though I know of no specific study that links ETT handling during intubation with ventilator-associated pneumonia, I would think that this careless practice might place the patient at risk of potentially introducing microorganisms into the trachea via the ETT. A better practice, instead, might be to state in the policy to leave the ETT in the package (one can still check the cuff integrity in the package) until such time as the intubator calls for the tube.

Other areas that can be evaluated are not only equipment change-out policies but, more importantly, the system of accountability to ensure we are following our own recommendations. Perhaps giving everyone permanent ink markers to date the nebulizers

about the author…

David R. Gibson, BS, RRT, is the clinical education supervisor at Medical City Dallas Hospital in Dallas, TX.

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1. Lellouche F, Taillé S, Lefrançois F, et al. Humidification performance of 48 passive airway humidifiers: comparison with manufacturer data. Chest. 2009;135(2):276-286.

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as they are put into use is a common sense way to ensure nebulizers are changed out on schedule. Other methods include eliminating room clutter, ensuring that sanitary wipes are available, and checking that equipment is wiped down after use. A little attention paid to the spread of MRSA may yield many positive changes. Whatever procedures we decide to change, it's important to make sure we are all on the same page with our policies with appropriate education and to later verify we are doing what we say we will do.

> Since MRSA is the most common resistant microorganism in the hospital setting, policies and procedures should be written with resistant *S. aureus* in mind.

Hygiene

To control the spread of MRSA, handwashing and the frequent use of alcohol-based hand sanitizers cannot be reinforced enough. Data suggests, though, that MRSA infection frequently comes from the patients own flora or "carriage," and possibly even the carriage of the MRSA-colonized respiratory therapist. Information on decontamination should be made available to all at-risk individuals, including staff. These suggestions include a week of body washing with chlorhexidine-based soap and application of nasal mupirocin. One might think of MRSA like the dandelions in your yard. Infestation is usually transitory and will eventually be replaced by some other weed: the message being that MRSA colonization can be controlled in individuals.

Education

Not only should RTs have a good understanding of the spread of MRSA, but our patients should be educated thoroughly as well. MRSA education should be required for all staff since identification of good practice will come from those applying these practices. This education is well justified if the expected result of decreased patient cost and length of stay is realized. Patients should be educated on the care and sanitation of take-home respiratory care equipment as well. The current recommendation of vinegar/water solutions should be effective in controlling *S. aureus*. Finally, as mentioned before, patients with MRSA can be decolonized, and education on decontamination procedures should be provided.

Infection

Although vancomycin-resistant *S. aureus* does exist, it is uncommon, so vancomycin continues to be the drug of choice for life-threatening MRSA infections despite ototoxicity and nephrotoxicity. For wound or skin infections that are not life-threatening, trimethoprim is often used. New antibiotics to combat MRSA are in the pipeline, although they may not be available for years to come.

Currently, respiratory therapists do not prescribe drugs, so rather than discuss antibiotic therapy in further detail, it might be more beneficial to discuss how RTs might become aware they have an all-too-common MRSA infection so that they know what to do and when to seek treatment.

Hospital-acquired MRSA infections of staff are most frequently of the skin. Skin eruptions are common and frequently mistaken for spider bites (which, incidentally, are relatively rare). The major difference is that spider bites are depressed areas with a central necrotic center rather than swollen raised areas that contain exudates — as is typically seen with MRSA eruptions. Suspicious infections should be cultured; and if MRSA is found, the staff should undergo decontamination procedures as mentioned before. Superficial skin infections usually do not require antibiotic therapy, although deeper infec-

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tions of the dermis may need more aggressive antibiotic treatment. Worth mentioning also is that the anterior nares are the most common site of MRSA, and the area can be cultured to determine the MRSA status of any individual.

The RT's role

MRSA is responsible for significantly increased mortality rate, costs, and length of stay. Respiratory therapists at the bedside can play an important role in MRSA control in several important ways:

- first, by remaining critical of our practices and looking for common sense measures to reduce spread;
- second, by educating ourselves and our patients about MRSA and its epidemiology; and
- third, by practicing good hygiene.

As Bonnie W. Rawot, MD, infectious disease specialist at Medical City Dallas Hospital says: "Wash your hands, wash your hands, wash your hands." ■

ADDITIONAL READING

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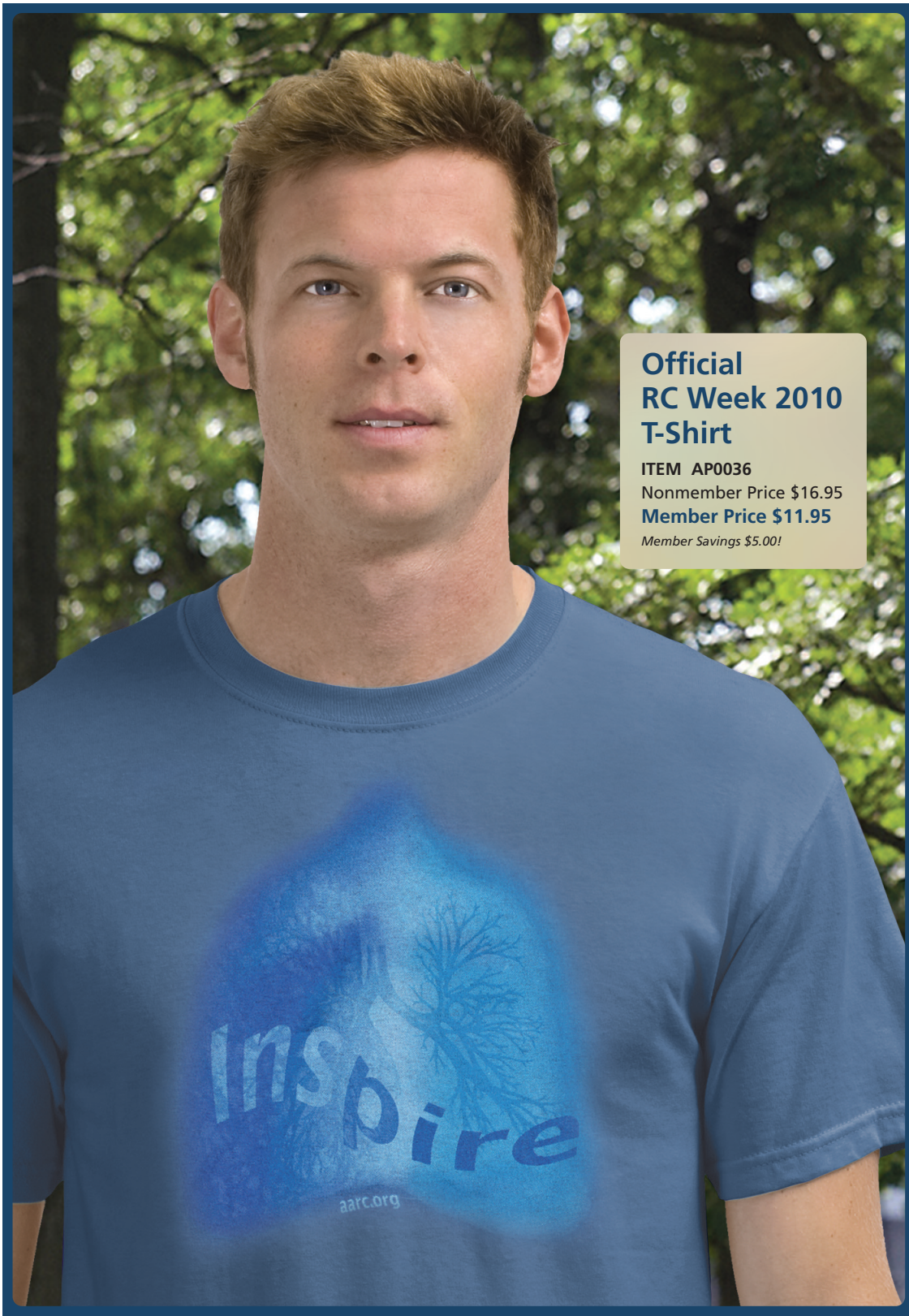

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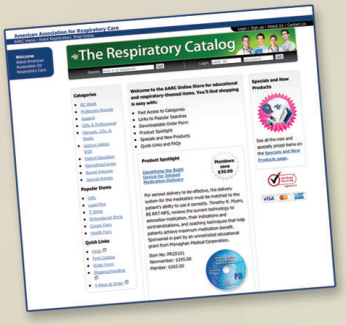

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A Conversation with the NHLBI

Susan Shurin, MD, acting director of the National Heart, Lung, and Blood Institute

Recently AARC COO Thomas J. Kallstrom, MBA, RRT, FAARC, conducted a telephone interview with Acting Director of the National Heart, Lung, and Blood Institute (NHLBI), Susan Shurin, MD, and NHLBI Director of Lung Diseases James Kiley, PhD, as well as Amy Pianalto, formerly of the NHLBI's "Learn More Breathe Better" COPD campaign. The three provided an overview of current activities at the NHLBI and how respiratory therapists and the AARC are key partners in furthering the NHLBI's role in the nation's lung health.

NHLBI leaders share their goals for lessening chronic lung disease and tell how respiratory therapists are helping them come to fruition

James Kiley, PhD, director of lung diseases at the National Heart, Lung, and Blood Institute

Dr. Shurin: The key issue is that respiratory therapists play such a critical role, not only in providing high-quality health care and support, but also in conducting research protocols, which, from our standpoint, is a very high priority. Respiratory therapists are committed to lung health and the general messages we want to get out, such as "don't smoke." The kind of messages sent by respiratory therapists all the time are ones that we spend a lot of time trying to get across. So we really appreciate that because we think you are a major source of education, as well.

Kallstrom: If you could speak directly to respiratory therapists, what would you tell them?

The very high quality of the respiratory care that respiratory therapists provide is central to making sure the studies we conduct are doing well. Respiratory therapists also make sure people benefit from the kinds of findings we get in our research. We see RTs as frontline ambassadors for lung health and a major part of our armamentarium in terms of combating lung disease.





Dr. Shurin: It is important, first of all, to understand how the funds are allocated within NHLBI and across most of the National Institutes of Health (NIH). The NHLBI has a relatively small intramural budget. It's about 5% of the total budget, so most of the funds go out to extramural institutions where your members work. Just over 23% of the overall NHLBI extramural budget has gone for pulmonary research. Over about the last eight years, it's been pretty level. In that period of time, the NIH has had a flat budget, which means we have a decrease in purchasing power. Inflation continues even though the money doesn't increase — and the important thing in that is that the pulmonary community has really held its own.

Kallstrom: There is a $3 billion budget for NHLBI. Your goal is to support diagnosis, treatment, and prevention of diseases of the heart, lung, and blood. How will pulmonary research be represented in this budget?

We don't allocate our funds on the basis of diseases or divisions — they are allocated on the basis of how the applications do in peer review. The lung community has submitted applications that have done well in peer review and have enabled us to continue our support at this level. Currently, a little over $627 million is going for research in lung diseases.

Dr. Kiley: We have a strategic plan that's been in place for several years. It is meant to be a dynamic document that allows us to adjust as we move along and take advantage of not only advances in science, but also of new knowledge that comes our way. We do the best we can to try to fill the gaps and address the important needs. We have three long-term priorities for the pulmonary research program.

Kallstrom: How do you envision pulmonary research to evolve over the next few years?

The first is the development of mechanistic-based treatments for lung disease. The second is to prevent the development and progression of lung diseases. And the third is to implement evidence-based clinical management strategies.

In order to meet these three long-term priorities — and they all go beyond a few years — we need to do a few things along the way. One is to do a better job of clinically characterizing the patient. But we also need to apply knowledge from the human genome project to the genomic characterization of lung disease, sleep disorders, and critical care medicine.

The second way to meet those longer-term goals is to achieve incremental gains in understanding the best mechanistic-based approaches to prevent lung diseases. Many of the therapies that we have in pulmonary diseases today are symptom based. They're not often based on mechanisms or pathways or knowledge about the epidemiology and pathobiology of the disease. What we want to do is try to take advantage of a lot of the new tools and technologies and see if we can look upstream from when you start to see symptoms to begin to target pathways that might lead to novel interventions and new therapies.

> **Respiratory therapists play such a critical role, not only in providing high-quality health care and support, but also in conducting research protocols, which, from our standpoint, is a very high priority.**
>
> *– Dr. Susan Shurin*

The third way would be to develop ways to treat lung disease and restore pulmonary function. We don't have anything that will halt the damage once it's begun, so we want to find ways to stop the damage.

Then finally, in the short term, we will try to elucidate the co-morbid interactions that occur with chronic lung disease and the multi-tissue, multi-cellular nature of it. We're looking at the crosstalk between the systemic whole organ response so that we can look at the cross exchange between the other organs and the lung. These are areas that we see as very ripe for research over the next few years.





Kallstrom: You recently sent out a press release describing how COPD reduces the heart's ability to pump effectively even in mild COPD or when there are no symptoms. When you talk about co-morbidities, they tie right into that.

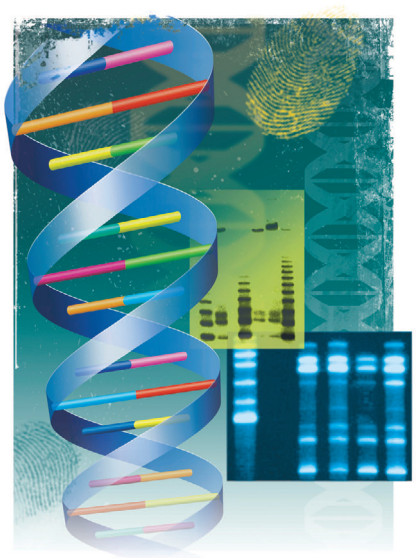
Dr. Kiley: That's a great example of the heart and lung talking to each other in ways that maybe we haven't really appreciated fully in the past. We're trying to figure ways to exploit that now.

> **Clearly in the arena of human research, the clinician scientist is critical, because without their active involvement, we cannot do the research. Clinicians are really very important as collaborators, not only for the implementation of various protocols, but also for the questions that are being asked.**
>
> *– Dr. James Kiley*

Dr. Kiley: COPD gene is the largest study ever to investigate the underlying genetic aspects of COPD. While we know that cigarette smoking can cause COPD, it only does so in a minority of smokers. So that raises the question: What makes an individual susceptible from a genetic basis?

Kallstrom: Can you give us a brief description of the COPD gene study and its progress as of this year?

This study has a very ambitious goal, which is to recruit 10,500 participants over a few years. They have now recruited almost 70% of the target number, both smokers and ex-smokers. The study is very expansive. There are two major sites that are conducting a lot of the main activities. One is in Denver under the leadership of James Crapo, and the other is at Brigham & Women's Hospital in Boston under the leadership of Ed Silverman. But they really have tentacles that go out all over the country. I think they're up to about 20 different clinical centers that are involved in recruiting participants for this study, so it's a pretty big effort.



They are about halfway through their current funding cycle. The first 2,000 participants are being analyzed now. They're aiming for an early release of some of the genotype/phenotype data that they have been collecting over the first phase of the study. Just recently they held an imaging workshop because this study has *very* extensive characterization of the patients, primarily using CT imaging. And what they've done is bring together a group of people to determine how to best read and interpret these radiographs, how to best characterize these patients, and to catalogue all that in a standardized way so it can be used not only for research but also, hopefully down the road, for clinical purposes.

What we're seeing with this study, as well as with others, is that there's tremendous heterogeneity in this disease, and until we start teasing out what goes with what, rather than lumping everything together, we're not going to be able to tailor therapies and come up with personalized intervention strategies.

One way to do that is to do a much more extensive job of using the imaging technology we have today to really hone in on what those characteristics are that make people different and alike, yet all still be captured under the term COPD. I think the COPD gene project is going to provide us with a tremendous amount of information, not only about the genetic basis of the disease but also about a lot of other factors that are going to be important to push the research agenda as well as to better care for patients.

> **The development of new treatments is a process that involves all the stakeholders, including patients and their caregivers. Clinicians can help greatly by explaining the process to patients and patients' families so that patients can participate in research.**
>
> *– Dr. James Kiley*





Dr. Shurin: There's no national surveillance right now of COPD prevalence. One of the things that becomes a real challenge for us in terms of both research and education is that we need to have data on where the patients are and what their outcomes are to be able to really get a sense of what some of the major research questions are and where we can study.

Kallstrom: The NHLBI is working with the Centers for Disease Control and Prevention (CDC) on the COPD module. Where are you with this project, and what are the expected outcomes? How does the relationship between NHLBI and CDC work?

Part of the mission of the CDC is surveillance. It really has a public health mission as opposed to a research mission, such as what the NIH has. So one of the things that we do in situations in which there is another agency that is charged to do something that is of benefit to us is to develop an interagency agreement to help provide the data that we need. We have an interagency agreement with the CDC to support COPD surveillance. It will be done through the annual Behavioral Risk Factor Surveillance Survey, which is an ongoing module they have. And it will begin in 2011. There will be an established COPD module that will be available for adoption into the surveys that are taking place in all the states and the territories. We are helping support both the surveillance and analysis of the data.

Dr. Kiley: The translational theme has been one that we've been pursuing for several years now, and we're trying very hard to tackle a couple of elements of it. Usually by "translational," the NIH tends to mean the movement of basic science into the clinical arena or informing basic science based on clinical observations. It's probably safe to say that everyone wants new treatments that are safer, more effective, and efficacious. The development of new treatments is a process that involves all the stakeholders, including patients and their caregivers. Clinicians can help greatly by explaining the process to patients and patients' families so that patients can participate in research.

Kallstrom: Translational research is important for clinicians to understand and be involved in, so how do you suggest clinicians position themselves for this? What should our expectations be?

The simple answer is, translation research is a process that involves many people in order to make progress. We need the help of clinicians and patients. NHLBI sponsors a lot of programs to facilitate the movement of new treatments along a path to development, not just starting with discovery and basic information, but also applying that in clinical trials.

Over the years we've released a number of new programs that are targeting the gap between this basic discovery and clinical practice, and these programs are attempting various proof of concept studies in humans. We invite clinicians to convey to their colleagues and patients the message that peer-review testing of new treatments and interventions, particularly for COPD, remains a high priority for NHLBI.

You probably know that much of the research that comes into NIH is investigator-initiated. Those are questions that are generated by scientists and clinicians alike. Clearly in the arena of human research, the clinician scientist is critical, because without their active involvement we cannot do the research. Clinicians are very important as collaborators, not only for the implementation of various protocols but also for the questions that are being asked.

Also very important is the need for clinicians to enroll patients into the studies, because without that we really don't have the ability to advance knowledge. Translation goes in many directions; but for us, we see it as a continuum of discovery into the clinical arena and a process that involves many stakeholders to make it whole. Respiratory therapists play a role in that.

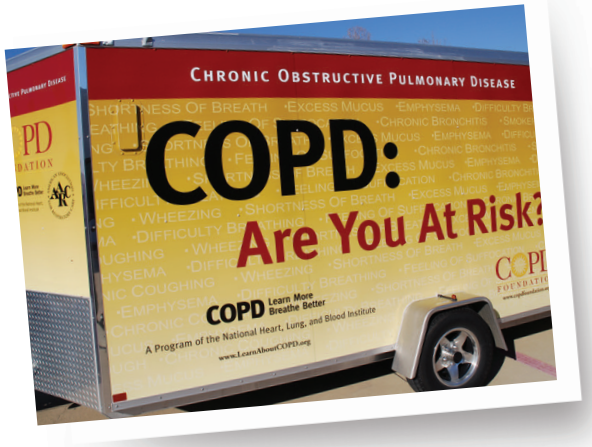
> The very high quality of the respiratory care that respiratory therapists provide is central to making sure the studies we conduct are doing well. Respiratory therapists also make sure people benefit from the kinds of findings we get in our research.
>
> – *Dr. Susan Shurin*

Dr. Kiley: AARC has been a very active partner, and we are very grateful for that. I think the biggest addition we have to the early days of the campaign is the 15 community- and state-based partners who are establishing COPD coalitions or instituting COPD programs across the United States. The Mobile Spirometry Unit is really a major contributor to spreading the word and getting the level of awareness up across the country.

Kallstrom: AARC has been a partner of the NHLBI's "Learn More Breathe Better" COPD campaign since its inception, and our respiratory therapists' involvement in the Mobile Spirometry Unit (MSU) has been a big part of it. What's next on the horizon?

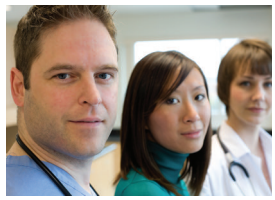
Moving forward, we see that the MSU will integrate with the Country Conquers COPD concerts; and hopefully we'll see opportunities there for further partnering. In general, we're going to continue to push on the awareness message. That was the goal of it to start with, and we don't want to lose sight of that. There are plenty of tools and resources available now so that anyone who feels they need to be evaluated for COPD has access, including respiratory therapists.

Pianalto: To add to that, we just did a round of additional research for the campaign to help us understand at this point what people understand about COPD and how can we move from awareness to really affecting some change of behavior — getting them to talk to their physicians and get a potential diagnosis of COPD. We are finding that people know COPD is a lung disease, but that's pretty much all they know. That information is coming from a lot of messages that have been out there in the marketplace over the last couple of years. So now what you'll see, and what the rest of the partners for the campaign will see in 2010, is a refinement of our messages so that we can begin to push some different buttons to stimulate someone to get tested if they are having COPD symptoms.



> What we're seeing is that there's tremendous heterogeneity in this disease, and until we start teasing out what goes with what, rather than lumping everything together, we're not going to be able to tailor therapies and come up with personalized intervention strategies.
>
> – *Dr. James Kiley*




We have three long-term priorities for the pulmonary research program. The first is the development of mechanistic-based treatments for lung disease. The second is to prevent the development and progression of lung diseases. And the third is to implement evidence-based clinical management strategies.

– Dr. James Kiley

Pianalto: AARC has been working with us on this campaign since the beginning, and we had three or four states engaged in COPD planning and activity when we started the campaign. Now we have more than 40 partners in different states. So there is a good message out there for your state societies that there is something tangible they can do. They can go to the organization in their state that's initiating a coalition, that's building a summit, that is writing a state plan, and as you said, talk to their state representatives about what needs to take place in their state. With a lot of the country really starting to get peppered with activities for the campaign, your state societies can play a big role.

Kallstrom: AARC is challenging each of our state societies to take the lead on what we've done nationally with the MSU and go to their state capitols and do the education and the testing for COPD to spread the word locally.

Kallstrom: Are there any parting thoughts?

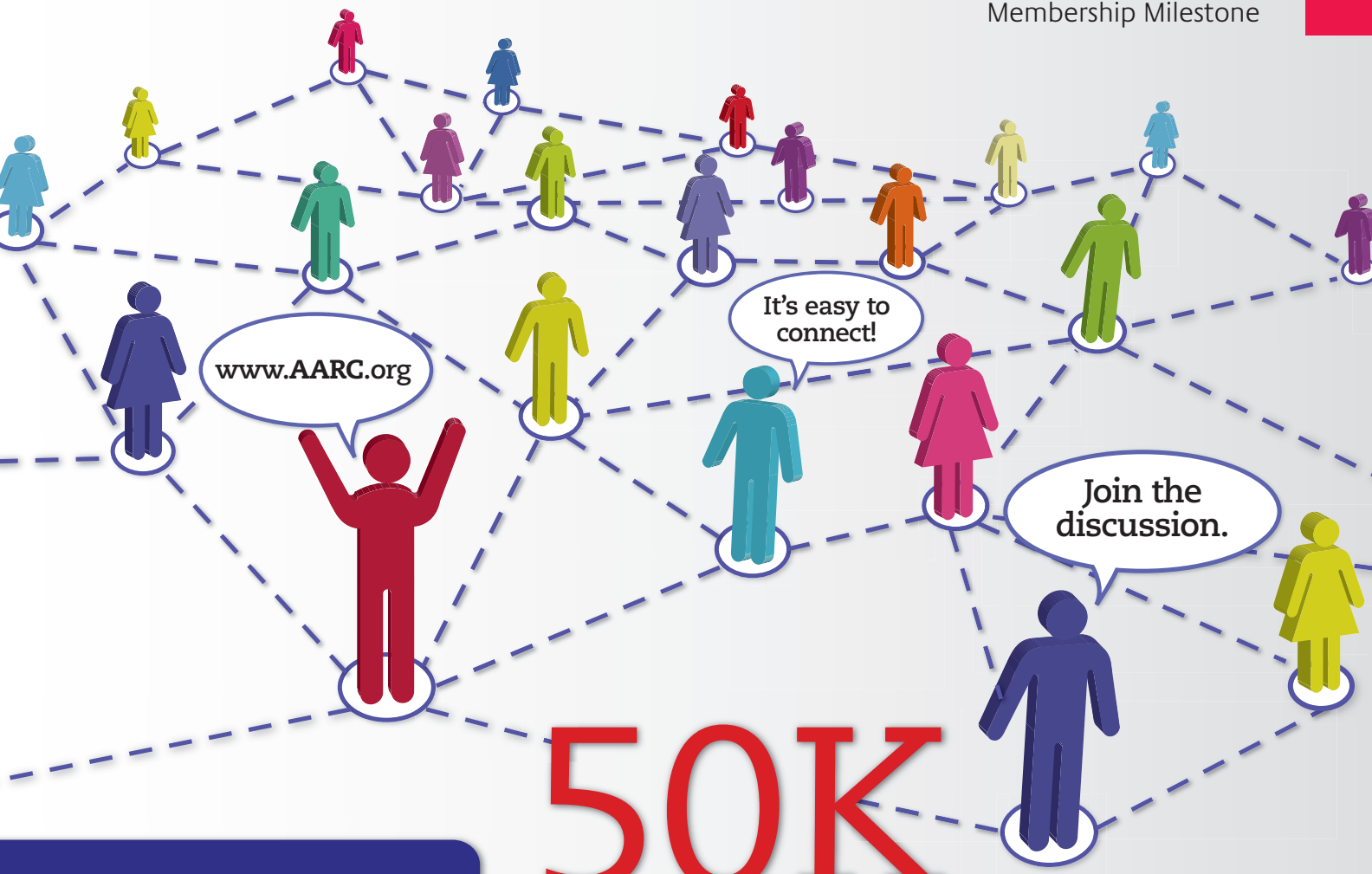
Dr. Shurin: We want to express our appreciation for all that you do at the AARC. We see you as being one of the major players in terms of education and management of patients. As with any chronic disease, it's the team that helps people learn how to manage the disease itself that makes the biggest impact.

Dr. Kiley: We appreciate the extra effort that all of you commit to research, because it's very easy to get really busy taking care of patients, and you have a big responsibility there. But I believe you've made a commitment to helping us with the research protocols and with the "Learn More Breathe Better" COPD education campaign. All of this is really a partnership, and without it I don't think we could make the kind of progress we're starting to see or have the same vision for the future. So again, I want to express thanks to all of you for giving us a chance to talk with you about some of the directions that we're taking.

Kallstrom: The AARC is also committed to helping this partnership grow stronger in the years to come. ■

ADDITIONAL READING

1. National Institutes of Health website. Endothelial dysfunction, biomarkers, and lung function — ancillary to MESA (MESA LUNG) (Ongoing Study). Available at: http://clinicaltrials.gov/ct2/show/NCT00843271 *Accessed March 16, 2010*



50K and Counting

AARC membership hits 50,000 for the first time in its 60+ year history

by Debbie Bunch

When the founding members of the AARC first gathered to incorporate the Inhalation Therapy Association back in 1947, they had high hopes for their fledgling organization. But with just 59 members, "thinking big" probably amounted to little more than hoping they would still be around in 1948.

Fast-forward 63 years and that tiny association has grown to represent one of the most important and fastest growing health professions around. And this year the American Association for Respiratory Care broke one of the most significant barriers in its history: We now stand more than 50,000 strong for the first time in our 60+ years of serving as the international professional organization for respiratory care professionals.

"This milestone demonstrates a continued commitment to the profession by our members. I think it is remarkable that AARC has broken another membership record in its sixty-third year of existence. Thanks to the leadership and our staff, we will continue to offer new benefits and increase our contribution to our members' efforts to care for patients with pulmonary diseases," **says AARC Executive Director Sam P. Giordano, MBA, RRT, FAARC.** *"We want to thank all of our members for helping us reach our highest level. Now let's go for 60,000!"*

Advocating for you

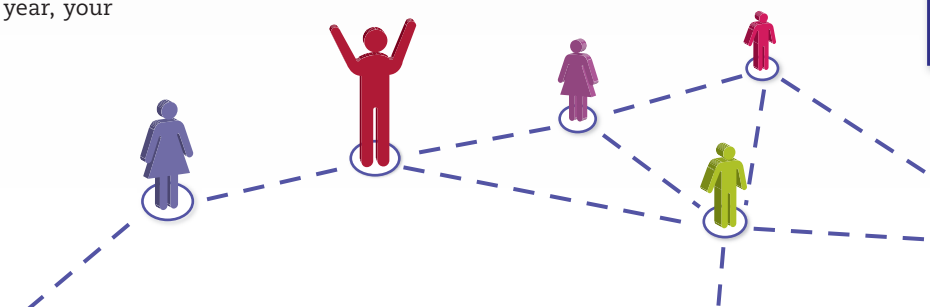
What has drawn 50,000 members into the Association? Of the many programs and benefits AARC offers its members, recognition of our advocacy efforts at the state and federal level have helped increase membership. AARC is your voice in Washington, DC, where the AARC's government affairs staff bring your issues, concerns, and needs — and the needs of your patients — to the forefront to key federal regulatory agencies and members of Congress. Our work with Congress goes back decades. Several thousand respiratory therapists, back in the early 1980s, fanned out across the nation's airports and surveyed airline passengers to see if they would support a ban on smoking on airlines. AARC was working with a number of public health organizations and key members of Congress on legislation to ban airline smoking. Congress was reluctant to finalize legislation that would impose this nationwide ban, fearing that there wasn't public support. AARC volunteered to coordinate a nationwide survey using RTs. We did, and the results were that last bit of convincing that Congress needed to enact the smoking ban.

More recently, AARC, again working with our sister pulmonary organizations, convinced Congress to enact an explicit Medicare benefit for outpatient pulmonary rehabilitation, ending years of patchwork Medicare coverage (or no coverage) for this essential health benefit for the pulmonary patient.

AARC government affairs staff is complemented by our Political Advocacy Contact Team (PACT) — dedicated RTs appointed by each state respiratory care society to be the coordinators of state legislative activities and, when needed, rapid communication going to Congress from RTs and patients in each state. Every year, your PACT representatives gather at the U.S. capital for our annual Capitol Hill Lobby Day, visiting with their members of Congress and health staff to promote AARC's legislative issues.

AARC is also involved in policies proposed by a number of federal regulatory agencies, most importantly the Centers for Medicare and Medicaid Services (CMS), the oversight agency for the federal Medicare program. Again, our work with the agencies goes back decades. When Medicare was finalizing its Clinical Laboratory Improvement Amendments, the agency proposed that pulmonary function testing (PFT) was not a respiratory therapy procedure and could not be done by RTs. AARC mounted an intense campaign, with astounding support from members, to "educate" the agency on the full practice of respiratory care. The final rules removed this limiting and erroneous rule, and today the fact that RTs can provide Medicare-covered PFTs is a testament to this effort.

AARC government affairs staff often meets with CMS staff on a range of issues to iron out areas of concern. We met with CMS staff, who agreed to accept AARC's position statement on Inhaled Medication Delivery Schedules, thereby resolving issues some hospitals were having with CMS surveyors. CMS accepted our recommendations on clarifying how RTs should be defined under the Medicare Comprehensive Outpatient Rehabilitation Facility (CORF) benefit. AARC, along with our pulmonary sister organizations, were able to mitigate the original restrictive regulations that accompanied the new pulmonary rehabilitation benefit.



"The AARC remains true to its mission statement as a not-for-profit by serving as advocate and the voice of the profession and the respiratory therapist," **says Association President Timothy Myers, BS, RRT-NPS.** *"AARC's leadership squeezes every ounce of the membership dues it collects for the advancement and benefit of RTs. Every dollar made gets put back into the profession to promote professional excellence."*

Reaching out

Advocating for the profession in Congress and with regulators is a key goal for the Association. So is advocating for the lung health of the community at large. The National Ventilator Survey the AARC conducted last fall at the behest of the Department of Health and Human Services is already helping government planners determine surge capacity needs on both the federal and state levels. Our work with the COPD Foundation is bringing a Mobile Spirometry Unit (MSU) to health fairs nationwide to test people for early signs of lung disease, which has resulted in a new protocol that more efficiently tests patients in a public setting for COPD. AARC's YourLungHealth.org website delivers targeted information to respiratory patients and their families every day, and our support of home oxygen patients has ranged from lobbying for portable oxygen concentrators on airplanes to requesting greater funding of chronic lung disease research.

For more information on membership benefits, be sure to read "AARC 2009 Annual Report of Activities and Member Services" in the June issue of *AARC Times*, which is also available on the Web at www.aarc.org/resources/.

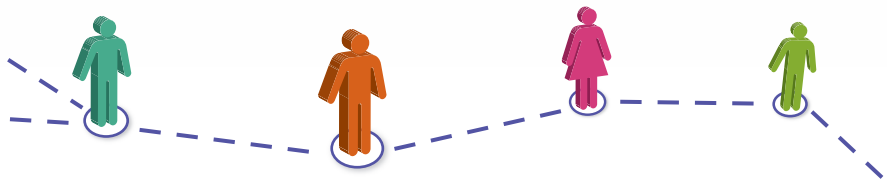
"AARC is committed to lung health, and that means looking past our own professional needs to the needs of the community as a whole," **says Immediate Past President Toni Rodriguez, EdD, RRT.** *"Outreach efforts like the ventilator survey, the MSU, YourLungHealth.org, and support for home oxygen users show our patients that we truly care about their health and quality of life."*

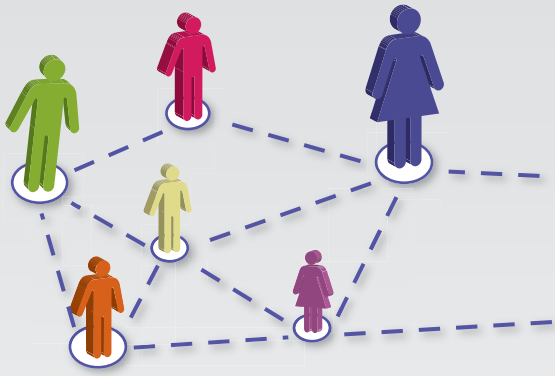
Continuing education

Of course, addressing fast-moving issues and contributing to the greater good are only part of the reason for this membership milestone. AARC supports many other activities that also figured into the achievement, and chief among them is continuing education.

The Association's two premiere meetings of the year highlight AARC's dedication to meeting this aspect of its mission statement. The International Respiratory Congress draws attendance from all over the world, and the annual Summer Meetings give managers, educators, and clinicians a chance to come together to learn the latest advances in respiratory care.

But education is available 24/7 at AARC. Our online-based programs provide cutting-edge information you can take advantage of at work or at home, making it more convenient — and cost-effective — to earn the CRCEs you need to maintain your state license. With approximately two webcasts every month — which deliver free CRCEs to members who participate in the live sessions — plus our Professor's Rounds series, online asthma and COPD courses, and other offerings, there is no limit to what you can learn right on your own computer screen.





"Continuing education is a fact of life for respiratory therapists, not just because our state licenses require it, but because things are always changing in our profession and we owe it to our patients to remain up to date," **says President-elect Karen Stewart, MSc, RRT, FAARC.** *"AARC delivers on both accounts."*

"Before AARConnect, AARC members could get together at the AARC Congress and Summer Forum, or through the e-mail lists," **says Membership Committee Chair Tom Lamphere, RRT, RPFT.** *"Now we also have a dedicated — and secure — place on the Web where we can learn more about our fellow members, invite them to join our groups or accept invitations to join theirs, swap information and advice — really do all the things we can do with the respiratory therapists we work with everyday, but just in a virtual environment. The connectivity is phenomenal."*

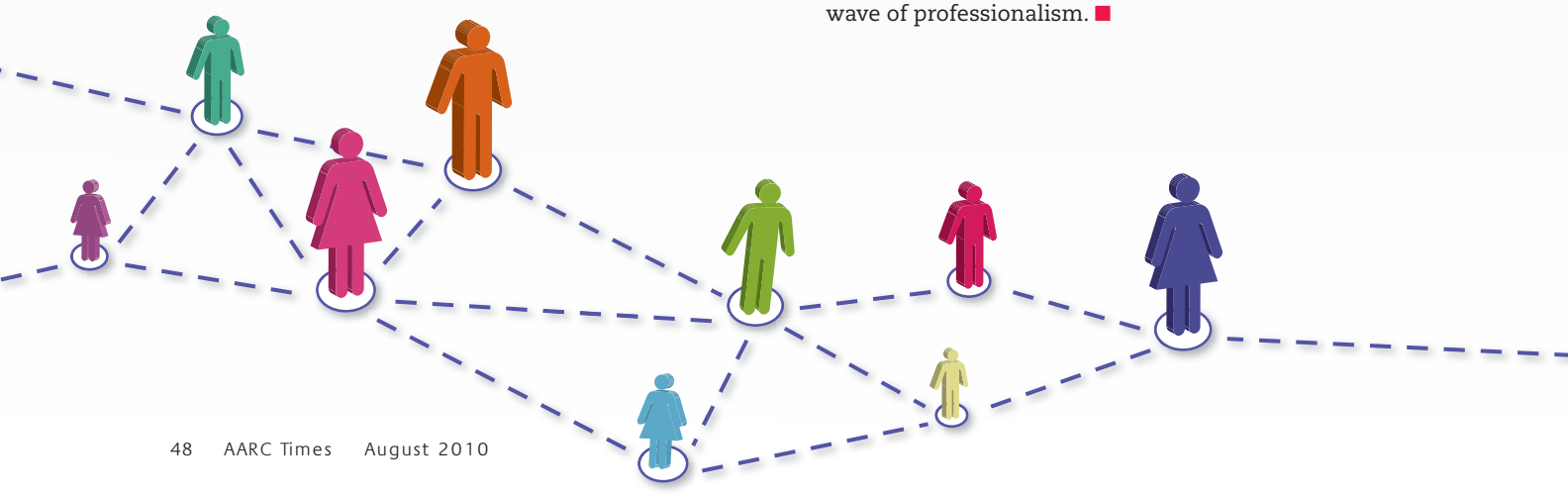
Sections, roundtables, and social media

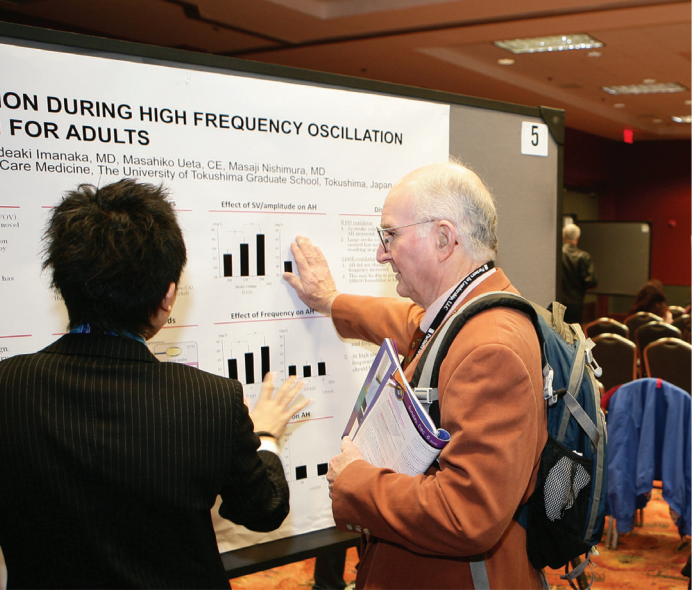
At the end of the day, however, AARC is a community of respiratory therapists; and while our annual meetings have always provided the opportunity to connect, this membership milestone also represents the Association's ability to harness the power of the Internet to bring that community closer together. Our specialty sections and roundtables have been giving members the chance to network with like-minded peers through real-time discussions that cover everything from the latest equipment to advice on the care of an individual patient for at least the past decade, but this year we took these tools up a notch with the introduction of our new social media site, AARConnect.

All the roundtable and specialty section e-mail lists are now operated through the site, but that just scratches the surface of what AARConnect has to offer. Now members have their own profile pages on the site where they can enter a little information about themselves (and post a photo), make connections with fellow members, manage all their e-mail lists, access resource libraries that are updated instantly, create new networks with like-minded peers, and even blog about their favorite topics.

60K, here we come!

The membership milestone we reached last spring is testament to all of these membership benefits and more (go online to www.AARC.org and click on our new "Savings Calculator" on the top menu to add up the value of your membership). But AARC leaders have no doubt that 50,000 is just the starting point for this new wave of professionalism. ■





Congress Preview:

Sessions Not To Be Missed in Las Vegas

The AARC International Respiratory Congress, scheduled for Monday, Dec. 6 through Thursday, Dec. 9, in Las Vegas, NV, is your ticket to cutting-edge information you can bring back to your hospitals and other organizations and put to work meeting cost and quality objectives. With more than 250 presentations covering all of the key specialty areas in the profession, it would be impossible to cover everything the meeting has to offer here, but over the next several issues of *AARC Times*, we're going to tell you about several great sessions. Let's get started with four you won't want to miss.

Open Forum features original research

Some of the best ideas for improving care and containing costs come from our annual Open Forum sessions. These short presentations of original research represent innovative ideas taking root across the country, bringing a level of diversity to the AARC meeting that's unparalleled by any other event.

This year's Open Forum will feature more than 300 abstracts clustered according to topic into 15–18 different sessions. Areas of interest range from management to education to diagnostics to neonatal/pediatrics and more. Each symposium will include poster presentations of the abstracts, plus time for discussion and interaction among investigators and observers, allowing for a healthy give-and-take that can lead to even greater understanding of the topic at hand. As past Congress attendees will attest, the strategies shared during the Open Forums are often the easiest to implement back home, because the information comes directly from people who are addressing the exact same problems and opportunities as the people in the audience.

Do you really need the arterial blood gas?

In hospitals all over the country, RTs are charged with drawing arterial blood samples from patients with acute lung injury, and ventilators are often adjusted based on the resulting $PaCO_2$ values. This lecture addresses whether it is a necessary measurement today.

Ken Tegtmeyer, MD, associate professor of clinical pediatrics at the University of Cincinnati College of Medicine in Cincinnati, OH, will address that question during a session titled "Does the Arterial PCO_2 Really Matter?" With a special interest in shock, sepsis, respiratory failure, head trauma, and mechanical ventilation, Dr. Tegtmeyer is well versed in the subject matter and will present a review of the medical literature on permissive hypercapnia and how it can be best applied at the bedside.

The AARC Congress: There Is a Difference

Big-name speakers offer big-time access

At a lot of educational meetings, once the talk is over the speaker quickly retreats. Not so at the AARC Congress. All speakers at the meeting stay after the session is done, making themselves available to visit with attendees. Whether you want to ask a question that wasn't addressed during the official question/answer period, share a special concern involving your own practice or facility, or offer your own perspective on the topic, these speakers are there for you. Sometimes the information you glean during these informal chats with the leaders in our profession can be worth the cost of your Congress attendance alone. ■

Unplugging little airways

Children whose airways are plugged with mucus need help, but determining the appropriate clearance method — drugs or devices — has been a challenge for physicians, nurses, and RTs. Bruce K. Rubin, MD, MEngr, MBA, FAARC, a professor from the Virginia Tech/Wake Forest University School of Biomedical Engineering and Sciences in Winston-Salem, NC, and Brian K. Walsh, RRT-NPS, RPFT, FAARC, respiratory care department director at Children's Medical Center in Dallas, TX, will square off in a session aimed at identifying the strengths and weaknesses of both methods.

Dr. Rubin will present the idea that drug therapy is the more effective route, while Walsh will talk about secretion devices and the role they can play in clearing little lungs. With new mucolytics coming on the market and hypertonic saline being used at an increasing rate, plus the dramatic increase in airway clearance devices over the past decade, this session is sure to foster a lively debate among the audience, as these two professionals go over the pros and cons and try to come to a consensus that attendees can take home to their own facilities.

Clinical Practice guidelines: an update

It's been more than 20 years now since the AARC first embarked on an ambitious effort to develop clinical practice guidelines (CPGs) for the treatments and modalities used by respiratory therapists. These practice tools have since been used throughout the country to guide patient-driven protocols and care pathways, and are credited with bringing RTs into the forefront of evidence-based medicine.

At this year's Congress, Ruben D. Restrepo, MD, RRT, FAARC, associate professor in the respiratory therapy program at the University of Texas Health Science Center in San Antonio, will update attendees on the activities of the CPG Committee, with special emphasis on the CPGs published this year. ■

Make a Deal in the Exhibit Hall

The AARC Congress Exhibit Hall offers programs and booths to educate attendees by providing information, services and products, and presenting industry trends pertinent to the field of respiratory care. Plus, attendees can often cover the cost of their trip to the Congress by taking advantage of special discounts offered by the vendors. Vendors wanting details on exhibiting at the AARC's International Respiratory Congress should log on to www.AARC.org/education/meetings and select "Prospectus." ■

▶ Find a New York strip on the Las Vegas Strip, and much more, at www.visitlasvegas.com

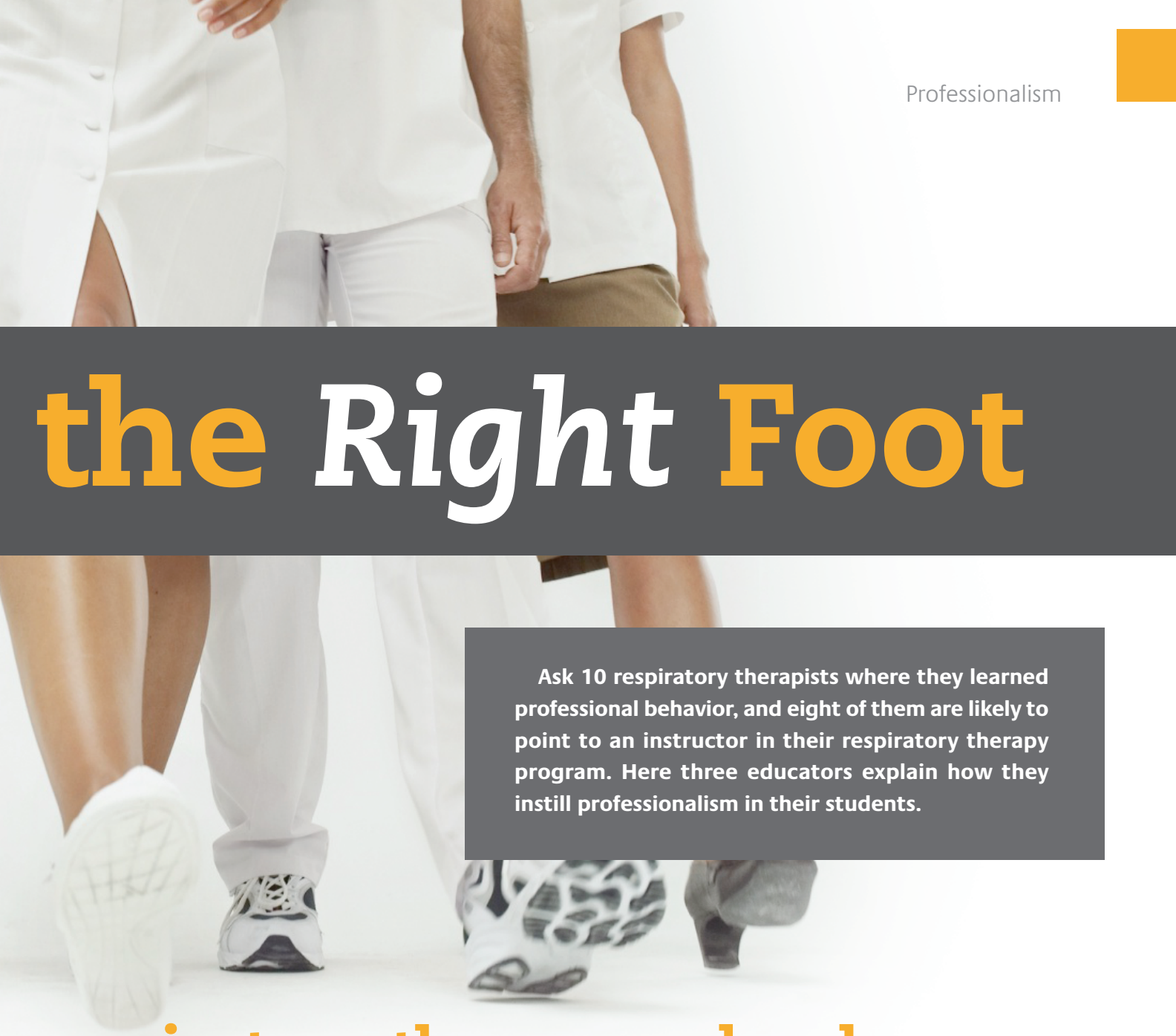
Getting Off on

by Debbie Bunch

Professionalism begins in

Take a look at the curriculum for any respiratory care program and it's easy to see educators have their hands full. Not only do they have to teach all the didactic courses necessary for a student to complete the degree, there are labs and clinicals to manage as well — all in a tight time frame for most programs around the country.

Should these educators really be responsible for how their students behave on the job, too? Yes, say three long-time respiratory care professors. AARC members Arzu Ari, PhD, RRT, PT, CPFT, from Georgia State University in Atlanta; Linda Van Scoder, EdD, RRT, FAARC, from Clarian Health and Affiliated Universities in Indianapolis, IN; and Pat Munzer, DHSc, RRT, from Washburn University in Topeka, KS, begin the process as soon as their students step into their first class and continue it throughout the program. They do it for many reasons — not the least of which involves accreditation requirements — but topping the list is the value it adds to the profession as a whole. Moving the respiratory care profession forward virtually demands a professional workforce, one that physicians, nurses, and administrators can confidently turn to when new services need to be added or new problems need to be solved.



the Right Foot

Ask 10 respiratory therapists where they learned professional behavior, and eight of them are likely to point to an instructor in their respiratory therapy program. Here three educators explain how they instill professionalism in their students.

respiratory therapy school

Just another program component

Dr. Van Scoder says instilling professionalism in new respiratory therapists is just as important as ensuring they are competent clinicians. "As educators, we have a responsibility to teach and evaluate the affective domain, which includes professional behavior," she says. "From day one my faculty and I emphasize professional behavior and provide immediate remediation whenever necessary." They make it a point to model good professionalism for their students, as well. "Students look to their teachers to see how a professional respiratory therapist is supposed to behave," says the educator. "If we act unprofessionally, chances are students will pick up on that and reproduce that behavior."

At Georgia State, Dr. Ari says professionalism is treated like any other component of the program. "Teaching professionalism in the first year of the respiratory therapy curriculum and setting our expectations about the professionalism of our students at the beginning of the program has made our students respond to the professionalism training very well, as they are given a clear ideal to strive for," she says.

Dr. Munzer establishes professionalism goals for her students at the beginning of the program, as well; she

Dr. Arzu Ari and her colleagues take a multifaceted approach to professionalism training.

4 Key Roles of Educators

How should respiratory therapy educators be involved in professionalism training? Dr. Arzu Ari sees four key roles:

1. The RC Educator as Expert: Educators must themselves be expert in professionalism, something most develop over time simply from having to deal with the unpredictability and challenges they've faced in patient care and other health care settings.

2. The RC Educator as Facilitator: Educators must be willing and able to help students overcome the obstacles that will crop up as they make their way through the program and into their clinical training.

3. The RC Educator as Role Model: Educators must model professionalism by demonstrating teamwork, humanism, ethics, integrity, confidentiality, and respect for others.

4. The RC Educator as Formal Authority: Educators must serve as a formal authority for their students, setting expectations, evaluating students' professional behavior based on those expectations, and providing feedback about their performance, growth, and areas that need improvement. ■

says part of the process involves promoting membership in the AARC. "One of my first lectures to new students at Washburn University is about the AARC. This includes discussing the AARC's professional code of ethics and how they will be held accountable to them," says Dr. Munzer. "This is important and is what managers expect of our graduates as indicated on the CoARC survey and feedback we receive from employers."

A multifaceted approach

All three educators incorporate professionalism into the curriculum in a variety of ways. Clarian formally assesses students on professional behavior, and incidences of poor professionalism can lower the student's grade in any of the clinical courses. "We also have a senior course in management and leadership where students receive instruction in how to behave professionally themselves, as well as how to encourage professional behavior in others," says Dr. Van Scoder.

Dr. Ari and her colleagues emphasize the importance of professional behavior and its consequences during the orientation session, and a detailed explanation of expectations is included in the student handbook. In addition to the first year didactic course, students attend a two-hour session on professionalism before embarking on their first clinical rotation. The course covers how to avoid exploitation, harassment, and discrimination at the clinical site and reinforces the importance of exhibiting respect for peers, clinical faculty, and instructors. Maintaining patient confidentiality is also emphasized, along with ethics and honesty.

Regular feedback shows students how they are doing. "Once our students start their clinical education, we perform bi-weekly multidimensional professionalism assessments including professional appearance, attendance, interpersonal relations, dependability, reliability, and quality of work," says Dr. Ari. "The faculty also exemplify and communicate our

Dr. Pat Munzer looks on as students Bryce DeKat (left) and Tanner Woods practice drawing blood on the department's mannequin.

Dr. Linda Van Scoder (left) talks with students Willie Melvin and Erica Binkerd.

professional ideals in what we teach and in the way we teach it and provide individualized mentoring and good problem-solving skills to our students when necessary."

Community service leads the way

At Washburn, Dr. Munzer and her colleague Rusty Taylor, MEd, RRT, foster professionalism through class assignments and a tough professional code of conduct. Like their colleagues in Indianapolis, they tie professional behavior to grades, as well. "Being unprofessional is grounds for a written warning, loss of points off the final semester grade, and grounds for dismissal from the program."

But she and Taylor also instill the concept of professionalism by requiring community service of their students. "Washburn University's respiratory therapy students are in-

(continued on page 57)

Top 3 Unprofessional Behaviors

When respiratory therapy students fail to meet professional expectations, what's the problem? Dr. Linda Van Scoder shares her top three list:

1. TARDINESS:
There is a certain percentage of students who think showing up five or 10 minutes late is perfectly acceptable. We do not, and we make sure there are consequences if they are late.

2. DRESS CODE ISSUES:
During classroom or lab courses our students may wear business casual attire or their clinical uniforms. This means that we need to teach them what is appropriate for business casual. They're sometimes surprised that it doesn't include flip flops or hoodies.

3. MISSING A CLINICAL SHIFT:
On rare occasions we have a student who misses an assigned clinical shift and fails to contact the site to let them know ahead of time. Unless there is a compelling reason for not calling — for example, they have been in a car accident and are currently comatose — this is grounds for immediate probation. A second incident could get them expelled. ■

PROFESSIONALISM at the Bedside

by Thomas F. Wallace, Jr., BS, RRT

AIDET model leads the way to high-quality care

A friendly word and a sincere smile are critical tools in any health profession, more so when the people with whom you are interacting are in an unfamiliar environment and in physical discomfort. At the Sisters of Mercy hospitals in Ardmore, OK, we follow the Mercy Basics: Acknowledge, Introduce, Describe, Expectation, and Thank. The AIDET model is a reminder to patient services providers to sincerely interact with those under their care. The consistent application of the Mercy Basics helps maintain a high quality of care when the work environment of day-to-day floor therapies might otherwise develop into a mundane workflow.

ACKNOWLEDGE:

First of all, greet your patients. Make eye contact, and make sure they have your attention and you have theirs every time you go into their room. Many people will enter a patient's room in the course of a day, and if you're just another passing technician, the patient has no motivation to be active in his own care. Be a true caregiver; part of your job is to assess the condition of your patient, and this is a good time to start. How does your patient look? Is the patient alert, breathing well? Is the patient wearing oxygen? You can be friendly and efficient as you multitask.

INTRODUCE:

Most patients are not "frequent flyers," and even those who are will have trouble remembering the names of everyone who treats them. Take the few seconds needed to review the patient's name beforehand and use it when you introduce yourself. I've seen a few therapists hardly look at patients and address them with an impersonal "sir" or "ma'am" throughout the entire interaction. Tell them who you are and that you're with the respiratory therapy department. Many times we're waking up our patients, and the introduction helps to orient them. I've had patients ask me what I was doing in their room when I've neglected this basic step.

DESCRIBE:

Tell them the procedures you are there to perform and give them all the instruction and information they will need to give their best effort. This will take time for a new order, but take the time. I've treated many patients who've stated that their previous RTs did not instruct them in how to take an effective treatment or how to cough or breathe more effectively. Don't assume your patients know it all. And even if they do, realize that their medications or illness can affect their memory, so present the information as a refresher. This way, you know they've been told and the proper techniques are reinforced.

EXPECTATION:

Tell your patients why they are getting this therapy and how long it will take. Many chronically ill patients are fully aware of their need for the treatments and will want to know when you will return and how often they're scheduled for your care. Some just like to plan their day or are new to respiratory care procedures and don't know what to expect. Many patients may be too timid to ask, so show them you want to make sure they are well informed.

THANK:

Most patients will beat you to this point, thanking you for your care. Remember, they have a choice in health care. The cooperation of most patients is taken for granted until you have to work around someone having a difficult day or treat a curmudgeon who wants to make sure you have a difficult day. Taking the time to look for and find a quality in your patient for which you can be thankful is a reminder to be cordial and to slow down. If you act like you don't have time for them, they *will* notice. Don't ask them if there is anything else you can do for them if you really do not have the time to address that need. If you do ask, and they need another cup of coffee, get it. I've watched some busy therapists do just that, with a smile. Kindness goes a very long way and shouldn't be random. ■

Thomas F. Wallace, Jr., is a clinical instructor and adjunct faculty for the respiratory therapist program at Rose State College in Midwest City, OK, and a respiratory therapist at Mercy Memorial Health Center in Ardmore, OK.

volved in various volunteer activities throughout the program. They perform pulmonary function [PFT] screenings at retirement communities, public health fairs, community events, and in collaboration with the mobile health unit in Washburn University's advanced nurse practitioner program," she says. Washburn students volunteer to perform PFT screenings at the state capitol during the Kansas Respiratory Care Society (KRCS) legislative day as well, and they assist with the KRCS State Education meeting.

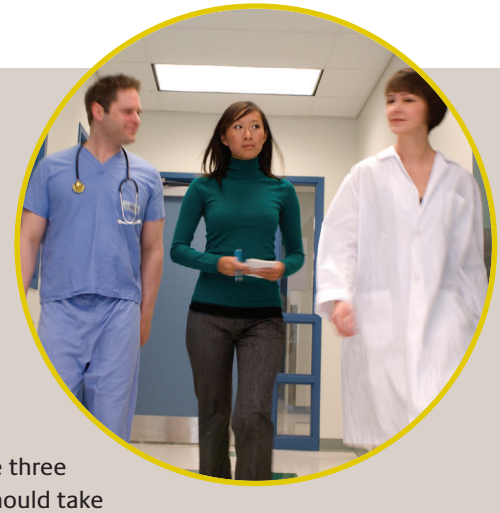
Their own Respiratory Care Student Organization offers opportunities to develop leadership skills related to these activities, and students often volunteer to take the respiratory therapy message back home, too. "At Washburn University we have many students from small rural communities," explains Dr. Munzer. During their spring breaks, these students go back to their high schools to present a program on respiratory therapy, which not only helps them develop professionalism and leadership skills but also benefits the program with additional enrollments.

What goes around, comes around

Dr. Munzer also develops professionalism in her students by having seniors mentor juniors, a practice that prepares them to mentor student RTs once they graduate and become clinical instructors (CIs) themselves. "For the senior students this inevitably leads to a discussion regarding qualities that you admire in your favorite CIs and how these qualities are ones that you should emulate," she says.

At Clarian, alumni who have already taken on the clinical instructor role are often the best evidence that all the professionalism training delivered during the program has paid off. "It's funny that some of the strictest clinical preceptors our students have are our program graduates," says Dr. Van Scoder. "They want to assure that the current students uphold the same standards that we expected from them." ■

Managers, Now It's Your Turn



As the first respiratory therapists most students ever meet, educators necessarily lead the way in professionalism training. But that doesn't let managers off the hook. Dr. Pat Munzer, Dr. Arzu Ari, and Dr. Linda Van Scoder have this advice for their colleagues on the other side of the RC fence:

"The one thing that managers can do that would be most helpful to us would be to assure that their employees act professionally. When students do clinical rotations, they look to the experienced RTs as role models. If those role models are always complaining and cutting corners, some students may think that's the way it's supposed to be and will pick up that behavior. I'm not sure the department staff always know how much attention students pay to their behaviors. If they see that the staff is professional during their clinical rotation, chances are they will exhibit that behavior when they become employees." **– Dr. Linda Van Scoder**

"I believe that there are three main steps managers should take in reinforcing the professional ideals in new RC graduates. First, they should share their expectations with graduates and explain the rationale behind them as well as the consequences of failing to meet them. Second, they should provide opportunities to grow in professionalism by utilizing ongoing assessment and providing feedback. Third, they can structure growth or impose consequences, when necessary." **– Dr. Arzu Ari**

"Open communication between educators and managers is very important. If either party hears or sees unprofessional behavior, it should be brought to the other person's attention." **– Dr. Pat Munzer**

4 Managers Answer 6 Questions About Making Their RTs Indispensable

There are usually people on staff who make such a big contribution whom no employer, even in the toughest times, would consider laying off during a staff reduction. Respiratory therapy managers from Arizona, Indiana, Florida, and North Carolina explain how they are working to ensure their respiratory therapists are *those* people.

Between a recession and uncertainty about how the health care reform law will play out, hospital leaders today are looking for added value at every turn. William Cohagen, RRT, FAARC, director of cardiopulmonary services at Banner Thunderbird Medical Center in Glendale, AZ; Joseph "Jay" Hodge, CRT, director of cardiopulmonary services at Hendricks Regional Health in Danville, IN; Stephen Elliott, MS, RRT, managing director of respiratory care at Florida Hospital, East Orlando, in Orlando, FL; and Janice Thalman, MHS, RRT, FAARC, director of respiratory care services at Duke University Hospital in Durham, NC, tell what they have been doing to position their respiratory therapists as staff their facilities cannot do without.

1. With the economy still in recovery mode, is it right to say that hospitals are still cutting back wherever possible and that it has never been more important for RC departments to prove their worth?

Cohagen: With all the changes that are occurring both politically and economically, effects certainly are being passed on to hospitals. In order to meet the future demands placed on us by economic changes and to counteract the predicted staffing shortage, we all must be proactive and open to change.

Now, more than ever before, we must "think outside the box." What we did yesterday will no longer move us into the future. Instead, we have a great opportunity to change the way health care is being delivered in the United States. Respiratory therapists can be change agents, and they need to take that to heart.

Hodge: I agree. Our facility has seen dips in volumes and revenue, and we have seen administrative directives to reduce costs. We greatly reduced use of agency staffing and overtime hours as a result. Administration used an organization-wide wage freeze, which worked and saved jobs.

Elliott: This is a bold truth. Our focus and recognition does not come from the administration of maintenance bronchodilator therapy. Our focus and attention should be directed toward critical thinking skills and early intervention in the acute care setting with accurate patient assessments and implementation of physician-driven protocols developed through evidence-based practice. The ultimate goal is always to return the respiratory-impaired patient to a "life of significance" as soon as they are ready and to reduce recidivism of the disease process through proper edification, asthma education, and pulmonary rehabilitation.

Thalman: As payment to hospitals for services gets squeezed even more, the contribution of all departments to patient care and the bottom-line success of the institution will be examined. The challenge for our profession is to provide care efficiently, to demonstrate outcomes that reduce cost, and to communicate essential information to our staff members as quickly and concisely as possible. RTs have the advantage of 24-7-365 availability on our side, and we offer service in all patient populations. We should capitalize on these unique advantages.

William Cohagen, RRT, FAARC

Joseph "Jay" Hodge, CRT

Stephen Elliott, MS, RRT

Janice Thalman, MHS, RRT, FAARC

"Our positions on specialty teams make respiratory therapists very visible within and without the facility. Our "can do" attitude garners compliments from administration."

—Joseph "Jay" Hodge

2. Have you seen any cutbacks of staff in your hospital or at other hospitals in your area?

Cohagen: We avoided cutbacks to my department last year by being proactive and growing our service line when the hospital mandated it. But I know of some hospitals in the area that did have staffing cutbacks in their departments.

Hodge: This organization eliminated a few high-level positions when people retired, but we have not seen any layoffs. Regionally, we have heard rumors of RC staff reductions at private hospitals, but these are not substantiated by facts.

Elliott: Thus far we have been fortunate not to have had deep cuts in the respiratory care departments at our eight campuses. However, restructuring that was needed to meet labor standards included delegating procedures. For instance, we are attempting to come in line with the nation in regards to delivery of metered-dose inhalers and dry-powder inhalers. Our respiratory therapists will complete the initial treatment and evaluation using a PIER-G and severity/priority scoring protocol. If the patient returns an appropriate demonstration and meets specific criteria, then the subsequent treatments are administered by nursing. By reducing the number of floor therapies, we feel we can redirect more attention to the acutely distressed and intensive care patients.

The bottom line is we have instituted a "tell me what I can use and I'll get it done" mindset and a "nobody is done until everybody is done" departmental culture.

Thalman: We have not seen cutbacks to existing staff in our hospital. However, there have been tighter review processes in place for filling any existing vacancies, efforts to reduce all traveler/agency staff, and a lengthy approval process for requesting any new positions. Positions that do not provide direct patient care are scrutinized at an even higher level.

3. What would you say are the top three to five things you have done in the past year — or are planning to do in the coming months — to make your staff indispensable in the eyes of your hospital administrators?

Cohagen: First and foremost, our protocol program has made us a true asset to the hospital in the eyes of both administration and physicians. We have been able to decrease length of stay (LOS) and exceed expectations, as well as serve as a proven extra set of eyes and ears for our physicians. We have also taken over invasive line insertion and maintenance — including A-lines, central lines, and PICC lines. This has helped to eliminate bloodstream infections in the ICUs and set new standards for the rest of the facility. It was accomplished in conjunction with assuming responsibility for the ventilator-associated pneumonia (VAP) reduction team and reinventing our own processes.

Networking with other directors and managers through the AARC's Management Section has facilitated these efforts. For example, when we wanted to do a breath-actuated nebulizer trial, I was able to glean information from a respiratory therapy director who had already been through the process. Lastly, we have empowered our staff to make a difference. We opened a 17-bed pediatric ICU this year, and our key RTs have formed their own group and are all becoming credentialed as neonatal pediatric specialists by the National Board for Respiratory Care in order to take their program to the next level.

Hodge: Our positions on specialty teams, such as C-section, disaster response, incident command, respirator fit testing, community tobacco-dependence treatment programs, fast-response teams, etc., make respiratory

"We have improved employee satisfaction by listening to the concerns of our respiratory therapists and coming up with either solutions or answers to why what they want cannot be accomplished."

—Stephen Elliott

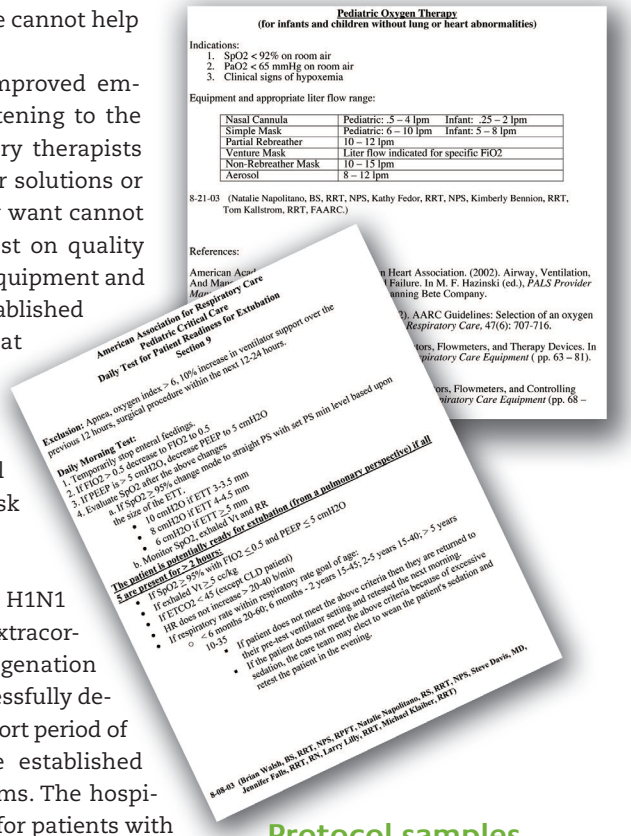
therapists very visible within and without the facility. Our "can do" attitude, coupled with our compassionate care of patients and family members, garner compliments from administration.

Elliott: As noted earlier, we have focused on the intensive care environment by transitioning many baseline floor therapies to nursing. This enables our RTs to get into the unit and work side-by-side with the intensivist to decrease ventilator LOS through the utilization of protocols and standing orders for weaning. We have also evaluated best-in-practice equipment to reduce VAP and skin breakdown, and we have implemented earlier and aggressive intervention with acutely distressed patients and the implementation of protocols. This has reduced the rate of admissions in the emergency department.

We have improved our turnaround time, as well, by working with physicians and nurses at the bedside early in an acute respiratory emergency. We have provided a variety of communication options to help fill gaps in STAT orders — including auto-page, wireless phones, and education — and supported the respiratory theapist's role on the rapid response team. We have also improved patient satisfaction and customer satisfaction through good communication, being responsive to needs and a caring attitude — the "nothing we cannot help with" attitude.

And lastly, we have improved employee satisfaction by listening to the concerns of our respiratory therapists and coming up with either solutions or answers to why what they want cannot be accomplished. We insist on quality and good stewardship of equipment and the clock, and we have established a team atmosphere that drives a desire to help with, not hide from, work. We've moved our culture toward critical thinking rather than task driven.

Thalman: In response to H1N1 flu, an adult respiratory extracorporeal membrane oxygenation (ECMO) program was successfully developed in an extremely short period of time to complement the established pediatric-neonatal programs. The hospital also identified the LOS for patients with tracheostomies as a performance-improvement focus, and the respiratory care depart-



Pediatric Oxygen Therapy
(for infants and children without lung or heart abnormalities)

Indications:
1. SpO2 < 92% on room air
2. PaO2 < 65 mmHg on room air
3. Clinical signs of hypoxemia

Equipment and appropriate liter flow range:

Nasal Cannula	Pediatric: .5 – 4 lpm	Infant: .25 – 2 lpm
Simple Mask	Pediatric: 6 – 10 lpm	Infant: 5 – 8 lpm
Partial Rebreather	10 – 12 lpm	
Venture Mask	Liter flow indicated for specific FiO2	
Non-Rebreather Mask	10 – 15 lpm	
Aerosol	8 – 12 lpm	

8-21-03 (Natalie Napolitano, BS, RRT, NPS, Kathy Fedor, RRT, NPS, Kimberly Bennion, RRT, Tom Kallstrom, RRT, FAARC.)

References:

American Association for Respiratory Care
Pediatric Critical Care
Daily Test for Patient Readiness for Extubation
Section 9

Exclusion: Apnea, oxygen index > 6, 10% increase in ventilator support over the previous 12 hours, surgical procedure within the next 12-24 hours.

Daily Morning Test:
1. Temporarily stop enteral feedings.
2. If FiO2 > 0.5 decrease to FiO2 to 0.5
3. If PEEP is > 5 cmH2O, decrease PEEP to 5 cmH2O
4. Evaluate SpO2 after the above changes
a. If SpO2 ≥ 95% change mode to straight PS with set PS min level based upon the size of the ETT.
- 10 cmH2O if ETT 3-3.5 mm
- 8 cmH2O if ETT ≥ 4-4.5 mm
- 6 cmH2O if ETT ≥ 5 mm

b. Monitor SpO2, exhaled Vt and RR

The patient is potentially ready for extubation (from a pulmonary perspective) if all 5 are present for ≥ 2 hours:
- If SpO2 ≥ 95% with FiO2 ≤ 0.5 and PEEP ≤ 5 cmH2O
- If exhaled Vt ≥ 5 cc/kg
- If ETCO2 < 45 (except CLD patient) 20-40 b/min
- HR does not increase > 20-40 b/min
- If respiratory rate within respiratory rate goal of age:
  - < 6 months 20-60; 6 months - 2 years 15-45; 2-5 years 15-40; > 5 years 10-35
- If patient does not meet the above criteria then they are returned to their pre-test ventilator setting and retested the next morning.
- If the patient does not meet the above criteria because of excessive sedation, the care team may elect to wean the patient's sedation and retest the patient in the evening.

8-08-03 (Brian Walsh, BS, RRT, NPS, RPFT, Natalie Napolitano, BS, RRT, NPS, Steve Davis, MD, Jennifer Fallo, RRT, RN, Larry Lilly, RRT, Mikhail Kleiber, RRT)

Protocol samples online at AARC.org

"We have partnered with physical therapy, pediatric pulmonary physicians, and nursing to develop a cystic fibrosis and airway clearance care team."

—Janice Thalman

ment approached this by establishing a trach-care team. After examining labor and productivity data, we found that the number of patients with tracheostomies on the intermediate and step-down floors justified one full-time equivalent (FTE) daily.

When administration wanted assurance that there was 24-7 immediate response to its outpatient clinics, we proposed that this facility be staffed with airway-certified respiratory therapists. Now an RT is scheduled on the 12-hour day shift, and the night shift is covered by a night shift "sleep call" RT, who is allowed to sleep onsite but will respond in the case of emergency. The medical director of a new interventional pulmonology program in the endoscopy service requested an RRT to assist him in the operating room and in the outpatient bronchoscopy suite. We also requested that a vacant RN position be reclassified to RT and moved into the respiratory care department staffing allocations. Administration agreed, and we have since been able to justify two additional positions for this service.

Due to liability concerns regarding an increase in the use of patient-owned equipment related to post-surgical obstructive sleep apnea (OSA) patients, respiratory therapists are now an integral link between anesthesia, the post-op patient, and the unit nurses. Following surgery, any patients with diagnosed or suspected OSA then receive an automatic respiratory therapy consult.

Lastly, we have partnered with physical therapy, pediatric pulmonary physicians, and nursing to develop a cystic fibrosis and airway clearance care team. The work group is preparing a formal proposal for hospital senior leadership that has the respiratory therapist front and center for the assessment and care coordination of this patient population.

4. How have your efforts paid off for your department so far?

Cohagen: My administrative team and physicians have renewed faith in our respiratory therapists and have called on them to be change agents and area specialists for all new initiatives. This includes new modalities like intubations and helping other departments establish protocol and best-practice programs. We have also established a culture that gives us autonomy in the patient care experience. One extra bonus to this is that we have a waiting list for students and an improved database for prospective staff.

Hodge: We have been asked to participate more on new projects. For example, we're involved in a new dialysis center, cardiac interventions, swallowing disorders, sleep apnea screening, and other things.

Elliott: It's too early to tell. Much depends on the organizational culture and the pattern of the past. We are still stepping out of the mold and chipping away at the model.

Thalman: In the past two years we have been approved for six new ECMO pumps, we have received approval to advance 12 respiratory therapists into the ECMO specialist positions, and we have received approval for five additional FTEs. We have worked directly with the hospital medical officer and hospital CEO.

"RTs wanted respect from their co-workers in the facility, growth and new opportunities in their job, and the chance to make a difference. It was their dream, made possible by providing the resources and opportunities."

—William Cohagen

5. How has your respiratory therapy staff responded to these efforts to make them indispensable?

Cohagen: When I joined this team three years ago, I surveyed the staff on what they wanted and where they wanted to be as professionals. The results showed they wanted respect from their co-workers in the facility, growth and new opportunities in their job, and the chance to make a difference. It was their dream, made possible by providing the resources and opportunities. The staff developed and embraced the changes needed to become indispensable, but they realize they have to continue working to maintain that. Since the plan came from the staff, I had total buy-in to help them create and achieve their dreams.

Hodge: No matter how good the idea or the sales technique employed, some will resist. For those who have taken that path, which have been very few, we have simply informed them that every respiratory therapist must be able to perform and meet the minimum expected competencies, like neonatal resuscitation program (NRP), pediatric advanced life support (PALS), advanced cardiac life support (ACLS), etc. They can step up and comply, with or without our help in coaching and tutoring, or suffer their chosen fate. In other words, it is their choice to comply or leave.

Elliott: The staff remains somewhat skeptical and will be convinced when consequences for non-compliance are witnessed.

Thalman: Not all of the new responsibilities have been met with open arms by all of our staff members. However, we have been able to provide some alternative roles that are desirable for some therapists: different scheduling options, specialized roles, extra earning possibilities, technical growth, and heightened exposure and demand for RTs throughout the institution.

6. What advice do you have for other managers who want to make their RTs indispensable?

Cohagen: Include your team and lead them toward the goal, don't drag them. Empower your staff to be change agents because, in reality, they are the ones who will make the biggest change. Like Walt Disney said of his success with his Imagineers, "Let them dream, believe, dare, do."

Hodge: To use a Hollywood phrase for gaining recognition, "Get your face out in front of the cameras." Become so visible that they don't dare risk eliminating the star.

Elliott: Determine the direction you want to take your team. Focus on the skills that are unique to your organization and determine how you can reduce LOS and recidivism by implementing protocols for therapies, oxygen, and mechanical ventilation. Take every opportunity to seek input from staff — get out from behind your desk and learn by walking around and seeing what they feel.

Thalman: Build on your RTs' unique 24-7-365 centralized availability. Do not be afraid to extend your department. It may be painful initially, but as opportunities unfold and the demand for your services increases, administration will become more and more likely to approve the necessary resources. Your respiratory therapists will step up to the plate and do an outstanding job; the end result will be the health care system approaching you for your services. ■

Disease Management: The Future Is Now!

RTs can *and are* managing chronic respiratory patients in programs across the U.S.

by Debbie Bunch

Now that health care reform is the law of the land, everyone from the insurance executive to the hospital administrator is looking seriously at ways to more effectively — and cost effectively — manage the health of people with chronic conditions. No longer just a nice idea, disease management is expected to enter the mainstream; and as the only allied health professionals specifically trained in respiratory care, respiratory therapists are poised to make a big impact in managing chronic respiratory problems like asthma and COPD.

In the following articles, we feature respiratory therapists working in three disease management programs today. One program is sponsored by a large health insurer, another run by a children's hospital (and tied to state public health programs), and the third is operated in ambulatory care settings by a large health system. They all provide a glimpse into the future for many RTs who may find themselves in similar positions as health care evolves.

The Big Health

Jakki Grimball, MA, RRT, AE-C, had her eye on disease management for 20 years before she finally landed a position with a large health insurer in 2000. With a long family history of asthma and an asthma diagnosis of her own, she had learned what it takes to manage the condition properly, and she wanted to help others do the same.

"We provide **educational phone calls** to all members of BlueChoice HealthPlan of South Carolina (a subsidiary of BlueCross BlueShield of South Carolina) **who have asthma or COPD.** Currently, we have more than 6,000 members enrolled in the asthma program and over 1,500 enrolled in the COPD program," she says.

Jakki Grimball's disease management services are helping lead to better outcomes at BlueCross BlueShield of South Carolina.

Insurer Perspective

Despite waiting two decades for the opportunity, it still took some outside-the-box thinking to get the job. "I saw an ad in the local paper for a registered nurse (RN) to manage a disease management program at BlueCross BlueShield of South Carolina," recalls Grimball. She sent in her resume anyway, doubting she would ever hear back. But to her surprise, she received a call about an interview. When asked why a respiratory therapist could do the job better than an RN, she explained that an RT specializes in respiratory illness and thus was the best match for a program aimed at managing asthma and COPD. "I was soon called back for a second interview and hired," the AARC member says. "My staff at that time consisted of two graduate assistants, one in social work and the other in nursing. When they both graduated, I convinced management to hire RRTs."

Today Grimball is the program administrator for the asthma and COPD program, where she supervises one part-time and two full-time RRTs, one of which is also a Certified Asthma Educator (AE-C). "We provide educational phone calls to all members of BlueChoice HealthPlan of South Carolina (a subsidiary of BlueCross BlueShield of South Carolina) who have asthma or COPD. Currently, we have more than 6,000 members enrolled in the asthma program and over 1,500 enrolled in the COPD program," she says.

In addition to making the calls, Grimball researches and develops interventions and call scripts and performs data mining, analysis, and reporting. She also works with pharmaceutical companies to procure educational materials and makes special calls to members who are high risk or very high risk for repeat admissions, exacerbations, and emergency department (ED) visits. She and the staff promote asthma awareness and management to the community through health fairs, career fairs, and school career fairs, as well.

The program has paid off big time for the insurer. "Hospitalizations and ED visits for asthma and COPD at BlueChoice HealthPlan have decreased since December 2000," she says. "In December 2008, ED visits decreased 18%, inpatient admissions decreased 18%, and the controller medication rate had little change while the rescue medication rate decreased 74%."

Patients tell the story: One little girl illustrates the benefits of the disease management program. "I had a three-year-old child who was being seen in the ED at least twice per month for asthma," explains Grimball. One of 14 children, she had been adopted by her aunt along with eight of her siblings. Most of her ED visits were by ambulance from daycare; and when Grimball spoke with her caregiver, she quickly realized getting this child's asthma under control was going to require more than just a phone call. Luckily, BlueChoice HealthPlan also has an asthma management program called Great Expectations® that provides free home visits by a respiratory therapist for asthma education and a home assessment. Grimball quickly called the program into action.

The RT's visit was a real eye-opener. Not only did he uncover numerous home triggers, but also the child's medication regimen was completely off kilter. "Each time the child was seen in the ED she was given a new prescription for an oral corticosteroid and was taking a dose of three different drugs per day, plus rescue medications," says Grimball. The Great Expectations RT educated the family about proper use of medications, avoiding or eliminating triggers, and the signs and symptoms of asthma, while Grimball educated the staff at the daycare center, obtained a new nebulizer for use at the daycare, and pointed the family to a family physician.

An unintended but fortunate consequence was that the father was seen by the family practitioner shortly after the child was referred and was found to have three-vessel heart disease that required an emergency triple-heart bypass. "The child has done so well she has been discharged from the asthma program, and the family overall is doing well," says Grimball.

Advice for her colleagues: Grimball encourages RTs who want to get into disease management to become experts in the area by taking review courses and becoming a certified asthma educator. "I also encourage RTs to advocate for their expertise and apply for positions in cardiopulmonary areas where RNs now work. I believe RTs are the best educated and trained individuals to care for and manage patients with respiratory conditions." ■

EDITOR'S NOTE

BlueCross BlueShield of South Carolina and BlueChoice HealthPlan of South Carolina are independent licensees of the Blue Cross and Blue Shield Association.

The Public Health

Like her colleague in South Carolina, Candace Ramos, MHA, RRT, AE-C, got her foot in the door of disease management by applying for a job originally calling for an RN.

"I interviewed for an RN educator position that included designing a program that would take disease management out into the community and work with the primary care physicians to decrease ED/inpatient utilization, initially for asthma," she says. "The first step was assuring that an RT was a perfect candidate for this position."

Public health plan patients benefit from the disease management services provided by Candace Ramos and her colleagues at Children's Mercy Family Health Partners in Kansas City, MO.

Plan Perspective

The year was 2001, and the job in question was at Children's Mercy Family Health Partners (CMFHP), a not-for-profit safety net health plan owned by Children's Mercy Hospitals and Clinics in Kansas City, MO. The plan provides low-cost or no-cost health insurance to children and families through Medicaid and the Children's Health Insurance Program in both Kansas and Missouri. Once in the position, Ramos quickly hired another RT and began work on her master's in health administration. "Overseeing the disease management section of our health plans just seemed like a perfect fit for me," says Ramos, an AARC member.

As manager of disease management at CMFHP, Ramos oversees not only the asthma program but also programs for depression and diabetes. CMFHP currently outsources depression management but maintains a disease registry of members with chronic disease for mailings, newsletters, or phone calls from health coaches or care managers. The asthma team consists of three RRT/AE-Cs and two asthma health coaches who also have the AE-C and are certified wellness/health coaches, as well. One of these individuals is an RRT, and the other is a marriage and family specialist/LSW.

"I think for an RT to be in this role shows the value of our profession as more than 'neb jockeys,'" says Ramos. "RTs have a diverse background in chronic diseases and specialty training in many areas that benefit disease management. Though we may be respiratory heavy, the basic foundation of health allows us to cross over into other disease entities."

Statistics from the plan indicate it's working. "During the 20-month period from January 2008 through August of 2009 we saw a 22% reduction in ED utilization for asthma per 1,000 members, a 58% reduction in hospitalizations for asthma per 1,000 members, and a 36% reduction in asthma costs per asthmatic per month, excluding pharmacy costs," notes Ramos.

Patients tell the story: Ramos cites the case of a 17-year-old she called "JL" to illustrate how disease management services have benefited patients in the plan. According to the young man's asthma health coach, he has the worst case of asthma she has ever seen. He has been intubated three times in the past year and nearly died twice during those exacerbations. The health coach has been working with the family, which consists of the young man's grandmother, for the past year. "As part of this education, she noted that JL did not have an auto-injector on hand in case he had another severe reaction," says Ramos. "She instructed JL and his grandmother that it was imperative to have such a device because of his extensive medical issues." The family was given an auto-injector, and the grandmother believes it may have saved his life during his last severe reaction. "The support and education from the health coach continues, with the hope of improving JL's overall health status and reducing the need for emergency room visits and hospitalizations."

Advice for her RT colleagues: Ramos says that RTs who want to get into disease management need to get past all the people who might tell them they are not right for the job. "I think it is important to see no barriers with what we can do in chronic disease management or any other area outside of specific patient care of an RT. The only obstacles are those within us." She suggests learning all you can about disease and population management and continuing your education to become better rounded and well versed in the world outside of patient care. "Understanding that the disease is the foundation and thinking outside the box will move you in the right direction." ■

The Ambulatory

In most communities, hospitals and physician practices run on separate tracks, with little or no coordination of care between the two. Not so at Clarian Health Partners, a large health system in Indiana consisting of 17 hospitals and eight affiliates throughout the state. The Ambulatory Pulmonary Care Program (APCP) was initiated in June of 1999 and today includes a team of six RRT/AE-Cs — all of them AARC members — who are stationed in clinics in and around Indianapolis, IN.

The APCP team at Clarian includes (from left, top row) Teri-Lyn Morton, Dan Wilson, Debra Koeberlein, and Kathryn Perkinson. From left on bottom row are Janet Lee and Pamela Griffin. Not pictured are Julie Board and Dr. Lee Campbell.

Care Perspective

"Our program setting is within primary care offices, giving the patients disease management within their neighborhood," says Deb Koeberlein, RRT, AE-C, who staffs one of the clinics. "Our medical director recognized the advantage of 'face to face' interaction with the patients, allowing them the time needed to understand and learn to control their lung disease and to have their questions answered."

The pulmonary program operates under the system's population health management department led by Lee R. Campbell, MD, which owns a suite of 10 disease management programs covering everything from diabetes to migraine. "We have 19 clinic sites and more than 150 years of RRT experience working directly with patients in the primary care setting," explains AARC member Janet Lee, RRT, AE-C, manager of the program. "Because of standing orders and protocols, we are able to treat patients at the time of their visit, which helps the physician and expedites patient care. Our physicians and patients love our program, both finding great value in pulmonary disease management."

Koeberlein says the team shares a proactive vision to impact patient care prior to hospitalization, and they carry out that vision by providing direct patient care, acting as a resource for other health professionals, and serving as patient advocates. "We also act as a pulmonary case manager, providing resources for patients with barriers to care."

The specific resources include medication device education, reviewing action plans, pulmonary function testing and monitoring, medication education, environmental controls, and addressing barriers to care such as medication costs, goal setting, and medication reconciliation. "We spend up to 90 minutes with our patients initially and at least 30 minutes for a follow up," says the therapist. "We also offer one-on-one visits for tobacco-dependence treatments."

Patient satisfaction surveys give the program high marks. "Patients who participate in our disease management program feel their symptoms are better controlled and their quality of life improved," says Lee. "Year after year, APCP receives 4.8 out of a scale of 5 on patients' overall satisfaction with the program."

As for their outcomes, "One percent of asthmatic patients enrolled in our program visit the emergency department and only 2% of COPD patients," continues Lee. "That is an estimated cost savings of $1.8 million per year." Their quality of life surveys indicate 96% improvement for those who participate, and just 4% of their asthma patients have reported missed days of work or school during a given year.

Patients tell the story: Kathy Perkinson, RRT, AE-C, who staffs another of the clinics, has seen plenty of success stories among her patients. One six-year-old boy, for example, came to her after spending the entire winter coughing through the night. After being treated for everything but asthma, he ended up at her clinic with dark circles under his eyes from lack of sleep. Perkinson says his mother didn't look much better. "After a thorough evaluation and education with the mother about asthma, he was given a prescription for control medicine and scheduled for a follow-up visit in two weeks," she recalls. "At his follow-up visit, the dark circles under his eyes were gone, his symptoms totally controlled, and his mother said the improvement had given the whole family their life back. She could not have been happier." The boy continued to improve and, thanks to some environmental changes, was eventually well controlled on low-dose medication.

Advice for her colleagues: Lee and the APCP team say continuing education and knowledge — with understanding of current guidelines for the treatment of asthma and COPD — are prerequisites for any respiratory therapist contemplating a move into disease management. Being a certified asthma educator is essential as well; experience in a variety of specialties in the respiratory profession is also a plus. "Networking and maintaining ties to professional organizations like the AARC to keep current with standards of care is also essential," Lee notes. ■

Former Medical Director Explains Why APCP Stands Out from the Crowd

The Ambulatory Pulmonary Care Program (APCP) at Clarian Health Partners (see "The Ambulatory Care Perspective" article) may not be one-of-a-kind. But according to John Clark, MD, who until recently served as medical director for all of the disease management programs in the system, the RT-staffed program is definitely one of only a few around the country.

"What differentiates the Clarian APCP from other practices and hospitals is the degree of hospital commitment to ambulatory care and the degree of integration with the primary care practices in our community," says Dr. Clark. "In my 12 years of professional work, I've found it is relatively uncommon for a hospital — especially a large hospital system like ours — to have much in the way of outpatient programs, particularly off of the hospital campus."

Even rarer, he believes, is for the hospital to sponsor, and at times subsidize, community-based outpatient disease management programs that do not generate net positive revenue for the hospital. For example, about half of the work done by the APCP takes place in the system's Federally Qualified Health Centers Practice, which almost exclusively serves uninsured and public-pay patients.

"These disease management programs, like our COPD, asthma, and tobacco-dependence treatment clinics, exist purely to improve the health of the communities we serve and ensure that our high-risk patients have safe hand-offs to ongoing, effective, community-based care," says Dr. Clark. The nearly 95% reduction in ED visits for acute exacerbations confirms the benefits.

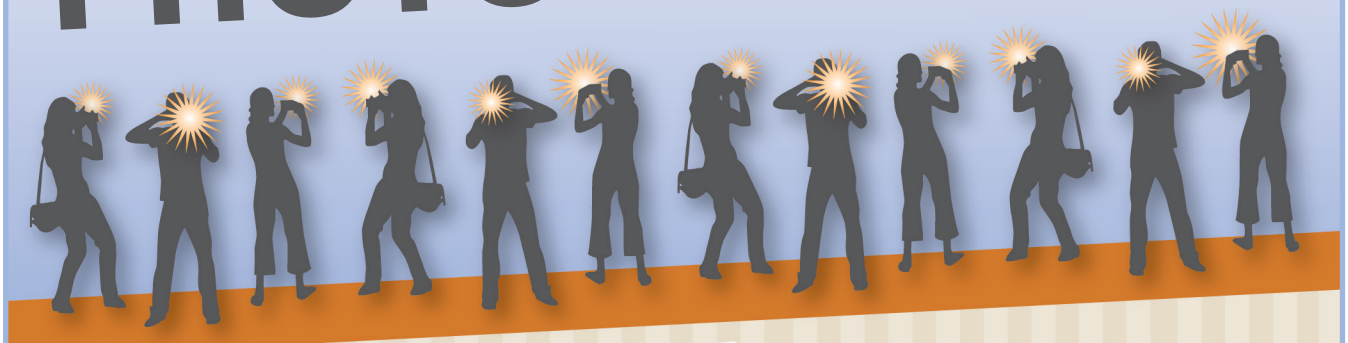
APCP Manager Janet Lee, RRT, AE-C, says the program continues to gain momentum and has several new initiatives, including:

- Incorporating the utility of fraction of exhaled nitrous oxide (FENO) in the management of its asthma population.
- Assuring disease management is part of the primary care physician's focus on the medical home, as well as Clarian Health's focus on the accountable care organization, a move that will impact the growth and utilization of disease management.
- Extending the services beyond asthma and COPD patients to those with other pulmonary diseases in an attempt to impact not only ED utilization and inpatient readmission rates but also quality of life for Indiana's pulmonary population. ■

CALL FOR ENTRIES

AARC Times

PHOTO CONTEST



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

HERE'S HOW IT WORKS:

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

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

WHAT KINDS OF PHOTOS ARE WE LOOKING FOR?

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

JUST FOLLOW THESE SIMPLE RULES:

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

IMPORTANT: PLEASE READ THE FOLLOWING PHOTO REQUIREMENTS

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

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

NO	YES

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

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

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

WWW.AARC.ORG

Marketplace

Featuring information on products and equipment from manufacturers

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

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

Industry Watch

SonarMed receives FDA clearance for airway monitoring system

According to SonarMed™, the company has received FDA clearance for its patented SonarMed Airway Monitoring System (AMS), which uses acoustic reflection technology to monitor breathing tubes for ventilator patients. The system was developed with grant support from the NIH as well as the state of Indiana's 21st Century Fund program. "There is a significant unmet need in respiratory care today that this system can address, and we are all looking forward to launching the SonarMed AMS and improving the lives of patients who require mechanical ventilation," says SonarMed President and CEO Andrew Cothrel.

Shafer named CEO of Philips Home Healthcare Solutions

Philips Healthcare has named Brent Shafer to serve as CEO of Philips Home Healthcare Solutions. Shafer joined Philips in 2005, serving as head of the Philips Healthcare North America Sales and Service organization, among other positions. As CEO of Home Healthcare Solutions, he will focus on strategies to bridge the hospital and home with innovative products and solutions in sleep, respiratory care, and home monitoring.

Discovery Labs announces new data on Surfaxin

New data on Discovery Laboratories Inc.'s Surfaxin LS™ were presented at the 2010 Pediatric Academic Societies Annual Meeting. The goals of the two studies were to demonstrate that Surfaxin LS improves lung function and oxygenation while attenuating lung inflammation in the preterm lamb model of respiratory distress syndrome (RDS).

CLSI publishes patient ID guideline

The Clinical and Laboratory Standards Institute (CLSI) recently published "Accuracy in Patient and Sample Identification; Approved Guideline" (GP33-A) to assist health care providers in the design, selection, implementation, monitoring, and evaluation of patient identification systems. Design considerations include criteria for accuracy, differences in inpatient versus outpatient settings that impact patient ID, language and cultural considerations, and standardization of processes across the health care enterprise. Guidance on system implementation and user training is included as well, along with validation of patient ID systems/programs and ongoing monitoring as a quality measure.

MIT student develops low-cost wound suctioning device

Massachusetts Institute of Technology doctoral student Danielle Zurovcik has created a hand-powered system to suction open wounds. Costing about $3 to produce, it can be used in the third world, military, and disaster relief. The device consists of an airtight wound dressing connected by a plastic tube to a cylinder with accordion-like folds. Suction is created when the device is squeezed, and the new dressing can be left on the patient for several days, as opposed to conventional dressings, which often must be changed up to three times a day.

FDA approves Alair Bronchial Thermoplasty System

The FDA has approved Asthmatx Inc.'s Alair® Bronchial Thermoplasty System, the first medical device to use radiofrequency energy to treat severe and persistent asthma. Intended for patients ages 18 and older whose asthma is not well-controlled with inhaled corticosteroids and long-acting beta agonist medications, the Alair system uses radiofrequency energy to heat the lung tissue in a controlled manner. This reduces the thickness of smooth muscle in the airways and improves the patient's ability to breathe. To benefit, patients will require multiple sessions targeting different areas in the lungs.

Contec debuts new website for Sporicidin

Contec Inc. has launched a new website for Sporicidin (www.sporicidin.com). It is divided into four main industry categories — Cleaning & Restoration, Air Ducts & IAQ, Hospital & Medical Infection Control, and Dental. The site includes product information, technical bul-

letins, articles related to infection control and proper disinfecting techniques, and material safety data sheets.

Invacare reports success at Boston Marathon

Invacare Corporation's Team Invacare had an impressive showing at the 114th Boston Marathon in April, with Ernst van Dyk taking first place in the men's wheelchair division for a record ninth time. Krige Schabort took second in the men's race. Diane Roy placed second and Amanda McGrory came in third in the women's race. All of the Team Invacare athletes competed using Invacare® Top End® OSR racing chairs.

Pharmaxis announces completion of CF trial

Pharmaxis has announced completion of its second six-month, Phase 3 international trial assessing the effectiveness of Bronchitol in people with cystic fibrosis. The double-blind, placebo-controlled, randomized study comparing 400 mg of Bronchitol twice a day to control included 305 participants and was conducted across 53 sites in seven countries. An optional 26-week open-label uncontrolled Bronchitol extension is still running. The trial is the second of two trials in CF required by the FDA before a marketing application can be submitted in the United States. A total of 600 CF patients have now been recruited into the two trials.

DeVilbiss announces separation from Sunrise Medical

DeVilbiss Healthcare completed its separation from Sunrise Medical last spring, becoming an independent company effective April 2. DeVilbiss plans to focus on continuing its growth in respiratory and sleep products with its own independent management team, financing, and board of directors. "As an independent growth company, we will have the ability to singularly focus on our customers, consumers, and associates," DeVilbiss President and CEO Alan Panzer was quoted as saying. "Additionally, we now have a capital structure that affords us the opportunity to aggressively evaluate acquisition opportunities both in Europe and in North America."

The Joint Commission reworking NPSG 8

Given the difficulties many organizations are having in meeting the complex requirements of The Joint Commission's National Patient Safety Goal 8 (accurately and completely reconcile medications across the continuum of care), the commission is evaluating and refining the expectations for accredited organizations. While the evaluation is being conducted, survey findings from NPSG 8 will not be factored into the organization's accreditation decision, nor will survey findings on NPSG 8 generate requirements for improvement or appear on the accreditation report. However, Joint Commission surveyors will evaluate the organization's medication reconciliation processes, discuss opportunities for improvement, and collect information on the progress organizations are making in meeting NPSG 8 during the onsite survey. The revised version of NPSG 8 is expected to be ready for implementation in January 2011.

Masimo cost-effectiveness study shows cost savings

According to Masimo, a new cost-effectiveness study shows that implementation of the Masimo Patient SafetyNet remote monitoring and clinician notification system with Masimo SET pulse oximetry saved one hospital $817,000 in its first year. The study, which was presented at the International Anesthesia Research Society Annual Meeting last March, also projects that the hospital's future annual savings will be $1,295,000. Under the financial model established by the researchers, if all 5,815 registered hospitals in the United States were to implement Patient SafetyNet and realize the cost savings attained in the study, between $4.7 and $7.5 billion in health care expenses would be saved each year.

ACAAI handbook reports better outcomes with allergist care

The American College of Allergy, Asthma and Immunology reports it has published a book that includes abstracted and summarized data from 47 studies documenting treatment outcomes are better when allergists directly provide asthma care or coordinate a care team. "Asthma Management and the Allergist: Better Outcomes at Lower Cost" notes hospitalizations are reduced by as much as 77% for patients with moderate-to-severe asthma, ED visits are reduced by 76%, sick care office visits are reduced by 45%, and 77% fewer missed days from work or school are reported.

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

New Roundtables for Geriatrics and International Medical Missions

The AARC Roundtables provide special interest groups an opportunity to share ideas and information with other members who have an interest in specific niches within the profession, both online via AARConnect and at the annual Congress. Two new groups have been added recently.

Lisa Trujillo, MS, RRT, an educator at Weber State University in Ogden, UT, who has been on a number of medical missions to China and Africa, will lead the medical missions group. Participants will discuss the importance of these missions and share their own experiences traveling around the world to deliver respiratory care and educate physicians and nurses about our profession.

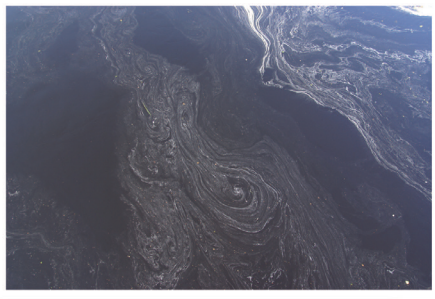
The geriatrics group will be led by Mary Hart, BS, RRT, AE-C, from the Martha Foster Lung Care Center at Baylor University Medical Center in Dallas, TX. Discussions will focus on any and all issues related to caring for older people with lung conditions.

All of the AARC's Roundtables are open to any AARC member at no extra charge. And now they are all housed on the Association's new social media site, AARConnect, at http://connect.aarc.org/AARC/AARC/Home. To join, pull down on Directory, and then All Communities. From there, simply click on the name of the Roundtable you would like to join, then click on Join Community. ■

AARC Tracking Health Effects from Gulf Coast Oil Leak

As of this writing in early June, the oil spill in the Gulf of Mexico has dominated the headlines for weeks. While most of the news has focused on attempts to plug the leak and clean up the mess, reports have also emerged suggesting the oil — and the dispersants being used to break it up — are having health effects as well.

According to articles in the *Los Angeles Times* and *Pittsburgh Post-Gazette*, workers hired by oil company BP to assist in the clean-up efforts were suffering severe headaches, dizziness, nausea, and difficulty breathing; at least nine workers had to be hospitalized. The Louisiana Department of Environmental Quality and Department of Health and Hospitals was warning clean-up workers to avoid skin contact and oral cavity or nasal passage exposure by using appropriate clothing, respiratory protection, gloves, and boots. The Environmental Protection Agency (EPA) reported finding petroleum odors strong enough to cause health problems as far as 50 miles away from the leak.



In response to these health concerns, the National Disaster Medical System was activated and a federal mobile medical unit was sent to Louisiana to help assess workers complaining of symptoms.

According to experts cited in the news reports, the most worrisome chemicals in the mix are volatile organic compounds like benzene, which are known to cause cancer at high exposures. But other chemicals in the dispersants are likely to cause acute symptoms such as those being reported by the clean-up workers. Because no one is certain which chemicals are in the dispersants, however, it has been difficult for scientists to nail down the problem.

Other experts believe the oil itself is just as toxic, if not more so, than the chemicals. According to Gina Solomon of the National Resources Defense Council, who was quoted in an article in *USA Today*, seven of the fisherman who had to be hospitalized after participating in the clean-up may have been hit by hydrocarbon pneumonia, which results when oil mist is inhaled into the lungs. She was concerned that the dispersants may be transforming the oil into a more breathable mist that could cause problems, especially in the case of high winds.

The National Institute of Environmental Health Sciences has a safety course all clean-up workers are supposed to complete before starting work, and requirements call for all workers to wear protective gear. But news reports were suggesting many workers were tackling the job without the benefit of these precautions.

The AARC is tracking the health effects of the spill and will keep members posted through *AARC Times* and the AARC website. ■

Member-to-Member Networking with AARConnect

The AARC is rolling out AARConnect, an exciting and engaging new online social network exclusively for Association members. Get started now at http://connect.aarc.org/. All you need is your AARC member number and password to:

- Interact with AARC members anywhere.
- Participate as much or as little as you like in discussions about respiratory care.
- Get your clinical questions answered through our Help Line.
- Start discussions of your own.
- Find old friends or colleagues with the robust search feature.
- If you're on a committee or in a Specialty Section or join a Roundtable, you'll find your fellow participants.

You control it all — how much information others see about you, how you want your e-mails delivered, what communities you want to belong to, and much more. ■

AARConnection...
maximizing your membership

AARC, The Joint Commission Issue Warning on Deceptive Promotion

The AARC and The Joint Commission are warning health care providers to beware of a promotion from a company that makes antibacterial nasal cannulas. Specifically, Ford Health International located in Humble, TX, has been communicating information to providers suggesting that The Joint Commission has standards mandating these devices.

AARC was also implicated as supportive of these devices in the promotion. We have issued a letter demanding that the company cease and desist this claim.

According to a notice in the June 9 edition of *Joint Commission Online*, The Joint Commission has no such standards, nor does it have any relationship with or knowledge of the company trying to sell the products. Neither does the AARC have a relationship with this company. ■

Enter the 2010 AARC Photo Contest

The AARC is looking for creative members to enter our monthly Photo Contest. *AARC Times* will collect photo entries from the membership, and winners will receive free dues upon membership renewal and automatically will be entered into the publication's Photo-of-the-Year Contest, to take place in the November 2010 issue.

The member who wins the Photo-of-the-Year Contest will have the photo on the front cover of the January 2011 issue of *AARC Times* in addition to being prominently displayed at the AARC Executive Office.

What kinds of photos do we want? Heartwarming pictures of your adult patients who rely on your care and guidance and who inspire you. Only high-resolution photos of good quality will be considered. Please read the requirements below so that you will send your photo in a format that can be reproduced in a printed magazine.

All entrants must be AARC members and must provide a release form signed by patients or co-workers pictured in the photos. The form is available online at www.AARC.org/headlines/photo_contest/release_form.pdf, or it can be faxed to you by calling Karen at (972) 406-4661. All photos in the contest will become the property of the AARC and will not be returned. Adhering to the following requirements will assure that your photo will be acceptable for publication. A good photo produced at the wrong resolution may render it unsuitable for reproduction in *AARC Times* magazine.

- Since the photo is for the cover, the picture must be in a vertical format.
- If your photo is taken with a standard film camera, we will need a color print shipped to us at Photo Contest, AARC, 9425 N. MacArthur Blvd., Ste. 100, Irving, TX 75063-4706.
- Most digital cameras give you a choice of settings for image resolution. Set your camera for the highest resolution photo and save it as JPEG Fine or JPEG Normal for most pictures. RAW is the best setting to use for large photos. Low-resolution photos will not be accepted for publication.

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

COPD Educator Course Provides Tools To Reduce Costly Hospital Readmissions

According to a 2009 study published in the *New England Journal of Medicine*, COPD is the third most frequent reason for hospital readmission. As hospitals take a closer look at conditions responsible for these costly readmissions, they will be seeking out clinicians who can step up and provide the disease management services necessary to keep patients out of the revolving door.

The AARC's new COPD Educator Course is designed to equip you with the tools you need to provide this new and important service. Sponsored by the AARC in conjunction with the COPD Foundation, this online course takes the learner through all the essentials of COPD disease management, including diagnosis and treatment, tobacco-dependence treatment, pulmonary rehabilitation, and managing hospital events from admission to discharge. The course is approved for 10 hours of CRCE and continuing nursing education credit. For more information, log on to www.AARC.org/education/copd_course/. ■

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

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

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

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

H1N1 Update

- While PCR (polymerase chain reaction) testing has emerged as the most sensitive and specific test for the diagnosis of H1N1 influenza, availability and turn-around time often limit its clinical usefulness. DFA (direct immunofluorescence assay) testing is used as a substitute, but Stanford University researchers find it is unreliable in ICU patients. Just five of 19 ICU patients (26%) in their research had positive DFAs for H1N1 infection confirmed by PCR testing or viral culture versus 27 out of 33 non-ICU patients (82%). (Presented at the American Thoracic Society International Conference)

- Centers for Disease Control and Prevention investigators who looked at 788 cases of H1N1 diagnosed in pregnant women between April and August of last year found 30 deaths. Adding another 165 women who required ICU care for H1N1 through December revealed 56 deaths overall. Based on these numbers, the researchers estimate pregnant women accounted for 5% of all H1N1 deaths even though they make up only about 1% of the population. (JAMA)

- New York researchers report outcomes for 47 fatal H1N1 cases occurring during the first wave of the pandemic in the spring and early summer of 2009. Results show most of the patients were between the ages of 18 and 49, with only 4% age 65 or older. Nearly 80% had known risk factors for severe seasonal flu, and 58% were obese. Chronic pulmonary disease and diabetes were the most common underlying conditions. Among 10 patients without underlying conditions, eight were obese. Thirteen patients had an invasive bacterial co-infection. Thirty-two patients received oseltamivir but were less likely than patients who survived to receive the drug within two days of hospitalization. (*Clinical Infectious Diseases*)

- Fear of H1N1 led to emergency department overcrowding last year, report University of Utah researchers. They compared visits made to a pediatric ED during three, week-long time periods: before the pandemic was publicized, after it was in the news but before it began striking people in the community, and after people started developing the illness. When compared with week one, the number of patients grew by 16.3% in the second week, dubbed "fear week" by the investigators, with children between the ages of one to four making up more than half of the increase. During the third week, dubbed "flu week," the percentage of patients rose by 22.4% over week one, with children ages five to 18 accounting for 91.7% of the increase. (Presented at the Pediatric Academic Societies annual meeting)

- According to the World Health Organization, by March of this year H1N1 had hit nearly every country in the world, causing 17,700 known deaths. The overall infection rate was estimated to be 11%, and the overall mortality rate 0.5%. Experts don't expect a major resurgence of the virus in the near future but are keeping a close eye on the Southern Hemisphere, particularly Australia, for clues on how H1N1 might unfold during the upcoming flu season in the northern half of the world. (*New England Journal of Medicine*)

- Researchers from St. Jude's Children's Research Hospital who studied 116 employees age 55 or older, 46 of whom had been vaccinated against the 1976 H1N1 strain, found those who had been vaccinated showed a much stronger immune response against the current H1N1 strain. The study was conducted last August, before the current H1N1 vaccine became available. The investigators are unsure whether the antibodies made by the vaccinated individuals would have been enough to protect them against the current strain but say the study does suggest a lingering effect of the vaccine. Best case scenario: The current vaccine will have similar long-lasting effects. ■

Military Minute: Gary Phelps, RRT-NPS

AARC Times: Which branch of the service were you in, and how long did you serve?
Gary Phelps: I served in the U.S. Navy from June of 1986 to June of 1992.

AARC Times: Where did you serve?
Phelps: I was stationed in the Middle East.

AARC Times: What was your most interesting or heart-warming experience related to your military service?
Phelps: There were so many, but I think what was the most rewarding to me was being able to change the lives of people you don't know. There is a language barrier, but the way that you conduct business and care for patients causes the tension and communication issues to vanish. Such was the case when I treated a young child with burns on more than 50% of his body. As a military respiratory therapist, I had the most experience with burns through my clinical rotation at Brooke Army Medical Center at Fort Sam Houston in San Antonio, TX. This meant I was placed in charge of this child's care, so I performed the debridement and supervised the dressing changes. By my confidence and supervision of fellow staff, the family was set at ease and the child responded to the care extremely well. It was a win-win for all involved. As sad and heartbreaking as the case was, I am glad that I was involved in changing and touching their lives in such a positive way.

AARC Times: How did your military service enhance your career as a respiratory therapist?
Phelps: The military provided me with my initial training and a wealth of experience that would have taken me an entire career to acquire. Even though the training was aggressive and tough, it was by far the best training I could get.

AARC Times: Where do you work today?
Phelps: I'm the respiratory clinical specialist at Scripps Health in San Diego, CA.

If you're an AARC member on active duty with the U.S. military, or a veteran of service, go online to www.aarc.org/go/mm/ and participate in our "Military

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. ■

The French Connection: 2006 Fellow Recalls Great Trip

by Anne Battisti, PT

French respiratory physiotherapist Anne Battisti (left) shown with other 2006 international fellows at AARC Congress

In September 2005, I ended my job in a mechanical ventilation research laboratory at University Hospital in Geneva, Switzerland, and joined the respiratory physiotherapy team. Laurence Vignaux, PT, who took over the research position, was an AARC fellow from France in 2004 and told me about her marvelous experience during her fellowship. I applied and became a 2006 international fellow.

During the first week of my fellowship I was at the Cleveland Clinic in Ohio, where I saw many units in which respiratory therapists had a very important place. I was welcomed by Doug Orens, RRT, and Leslie Patzwahl, RRT-NPS, and I had the great opportunity to meet Robert Chatburn, MHHS, RRT-NPS, FAARC, and James Stoller, MD, FAARC, as well. I visited the PICU, NICU, adult ICU, floors, and the ReSCU, a special unit for difficult-to-wean patients, which I found very interesting.

I also visited the Metropolitan General Medical Center, where supervisor Wendy Smith showed me the NICU, PICU, pulmonary rehab program, and the sleep lab. Next, Gene Andrews, RRT, took me to Hi Tech Home Care, where I saw all the available devices and also went to the homes of some patients, where I saw the role of the RT with chronically ventilated patients. I was very impressed by the entire infrastructure and the facilities for the patients and their families. I was also impressed by the education provided to patients and their families.

On my last afternoon in Cleveland, I made an hour-long presentation about my job in my hospital for all the teams, which ended with an interesting discussion about the differences between our two organizations. We also talked about collaborating on research protocols in the future.

The second week of my fellowship was in Atlanta, GA, with my hosts Vijay Deshpande, MS, RRT, FAARC, and Tom Madrin, BS, RRT, FAARC. At Georgia State University, I met Lynda Goodfellow, EdD, RRT, FAARC, associate professor, who told me about teaching and her respiratory care program. Afterwards, I met Doug Gardenhire, RRT-NPS, and Chip Zimmerman, two teachers who were also involved in research. They showed me some labs and classrooms, then Chip took me to the Eagle Hospital, a children's hospital where he had worked before. There I saw an infant on ECMO and watched staff perform a bronchoscopy on a baby. I also saw the PICU, which used the same ventilators as those used at my hospital.

Then Tom Madrin took me to Macon, where I visited a CICU, SICU, NICU, PICU, and MICU. I wore hospital scrubs and felt just like an RT. I saw again the strength of the respiratory care department and their responsibilities. I was so impressed by all the procedures, the freedom, and the work of the RRT. I thought to myself that it is with this vision that "respiratory care" really makes sense! I got to see a C-section code and assist in the respiratory care of the newborn.

At the respiratory therapy school in Macon, I met with teachers, directors, and classes. All the devices and didactical material really impressed me. I took home some protocols and some ideas to develop the activities of respiratory physiotherapy in my country.

The AARC Congress in Las Vegas was last on my fellowship schedule. I was so impressed by its importance and the number of members in the AARC (in my French Society, we have 300). I was so impressed by the quality of the lectures and speakers and was very moved by the keynote lecture given by Acting Surgeon General, Rear Adm. Kenneth P. Moritsugu, MD, MPH. The award ceremony presentations (and most of all, the pictures) featuring RTs during the war were very moving. That is something we aren't familiar with in France because our respiratory physiotherapists don't go to war.

The exhibitors were also impressive, and I participated in some of their ventilator lectures and a breakfast symposium. The reception for all the international fellows was just marvelous and will always be a wonderful memory for me. The American Respiratory Care Foundation and all the members of the AARC and our hosts were so generous with us. ■

▶Strange But True…

Know Your Limits: French researchers who used functional MRI to study the brains of people while they were performing fairly complicated tasks find multitasking isn't as easy as some believe. The subjects performed well while doing two things at once — but adding a third to the mix significantly increased the chances for mistakes. (April 15 online issue of *Science*)

Mommy, Daddy, and Mommy? British investigators have developed a technique to swap out mitochondrial DNA in embryos, with the ultimate goal of preventing mitochondrial diseases (those inherited from the mother) in offspring. Critics question the procedure, noting if babies were to be born using this technique, they would effectively have three parents: the man and woman contributing the nuclear DNA and the female mitochondrial DNA donor.

Sniffing Out Terror: The Department of Homeland Security is working on a new sensor that, when inserted into a smart phone, could sense a wide variety of noxious chemicals in the air. The application could play a significant role in early identification of a terror attack using chemical weapons.

Picture This: Just seeing a photo of someone who is sick might be enough to boost your immune system. Canadian researchers at the University of British Columbia came to that conclusion after studying blood samples taken from people after they were shown slide shows of sick people or people wielding guns. When bacteria was added to the samples, the samples taken after watching the sick people showed a stronger immune response.

Too High a Price: We all love those worn-looking jeans, but would we feel the same if we knew they were causing lung disease? According to Turkish researchers, the sandblasting technique used to age the fabric is causing silicosis in workers. Their study of 60 sandblasters identified 44 cases. (April 17 online issue of *Environmental Health*) ■

Members, Send Us Your Human Interest Stories

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

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

Only in the Sim Lab: "It's OK That Your Patient Died"

by David Zobeck, MM, RRT, CPFT, and James Christie, MPH, RRT

The COPD patient was lying on the stretcher in the emergency department. As soon as the therapist entered, the patient exclaimed, "I can't breathe." After a brief introduction, the respiratory therapist said, "I am going to take a quick look at your chart, and I will be right back to take care of you."

The RT noticed the order said to start oxygen at nine liters by nasal cannula. The therapist called the physician and was told, "Start him on what you feel is appropriate." Knowing a nine-liter cannula was the wrong thing to use, the therapist grabbed a non-rebreather oxygen mask.

David Zobeck (left) looks on while student Sherri Hunter treats a "patient" in the simulation lab.

"I still can't breathe!" gasped the patient. And in a minute or so, he stopped breathing entirely. Uncertain what to do, the therapist called the physician. "You did what?" he exclaimed. "He's not breathing? My God! Grab a resuscitation bag and call a code. I'll be right there."

Just then, the instructor entered the room and asked, "What happened?"

"I think I killed my patient." said the therapist.

"It's OK that your patient died," said the instructor. "This is the simulation lab. Now let's talk about what you should have done."

Most respiratory therapy programs are similar in design. The traditional model is typically classroom lecture, procedure laboratory, and clinical bedside experience. Since Lancaster General Hospital is only half a block away from our program at Lancaster General College for Nursing and Health Sciences in Lancaster, PA, bedside experience begins in the first two weeks of the first respiratory care laboratory course. This helps our students apply what they learn in lecture and lab to actual patient care.

David Zobeck, MM, RRT, CPFT

However, our million-dollar, four-room clinical simulation lab — complete with three high-fidelity computerized adult mannequins, two high-fidelity infant mannequins, and three low-fidelity computerized adults — allows us to take our respiratory care students into a whole different realm of patient care experiences.

We try to design patient care scenarios that assess not only the students' ability to correctly deliver therapy but also their decision-making skills. The simulation mannequins can mimic a wide range of clinical presentations, including cardiac arrest. With adjustable, lifelike vital signs and clinical presentations, patient assessment skills and clinical procedures can be practiced while trying to formulate a diagnosis. We can present nearly any type of patient to our students. They might not see a patient with a tension pneumothorax in clinical practice, but we can challenge them with that type of patient in the sim lab.

In the very first respiratory lab course, students learn about oxygen therapy devices and set-up procedures. When the student is at the bedside, we are their safety net. We won't let them

make a mistake. In the simulation lab they are given a simple therapy order to set up oxygen on a COPD patient, and they do not have their clinical coordinator watching over them.

Students quickly realize how important the information they learned is to the care they give to their patients. "It was a little awkward at first, but once I learned to treat the mannequin as a patient it was very helpful," reports Alesia Jerrard, one of the first respiratory students to visit the simulation lab. "It's a great place to be able to think things through without worrying so much about making mistakes."

Mistakes are actually part of the learning process, and we teach our students to learn from them. For example, in the earlier scenario, the student learned not to use a nonrebreather mask on a COPD patient, especially if the patient is a CO_2 retainer. They do not fail the simulation as long as they learn from their mistakes.

As students deliver their patient care in the simulation lab they are video recorded. While nervous at first, they very quickly forget they are being recorded. The videos allow the instructor to sit with the student one-on-one and review the procedure. The student can see everything he did from three different angles. We use the videos to point out errors in procedure, missed handwashing, lack of or poor communication to the patient, equipment dropped on the floor and used on the patient, etc. Students are upset with themselves for even the smallest mistakes but are reminded this is a safe area for that to happen. "I messed up a lot in my first sim, but I learned a lot by reviewing with the instructor afterwards," said Kate Brochu, a first-year respiratory student.

The sim lab allows our students to experience things they may not be able to experience in the hospital. After all, how often do we see tachycardia while giving aerosol meds? In the sim lab we can see it every day if we want. Students progress from basic oxygen and nebulizer therapy to intubation and ventilator management. In the final semester of the program, the student will have several lifelike clinical simulations based on the NBRC written clinical simulation exam. This hands-on, visual experience will augment the traditional computer-based preparations for the RRT credentialing exam. In addition, several multidisciplinary scenarios are being developed to allow students to practice the care of a patient at the bedside with staff and students from other clinical specialties.

The possibilities for a simulated learning lab such as this one are endless, not only for students but also for clinicians. Respiratory care departments may incorporate this type of learning into yearly therapist competencies. New employee orientations can be bolstered by patient scenarios in a simulation lab. As this new frontier in learning emerges, countless possibilities for use both in the educational realm and the clinical realm will surface. ■

David Zobeck is director of the newly formed RC program at the Lancaster General College for Nursing and Health Sciences in Lancaster, PA. James Christie is the program's clinical coordinator.

High-fat Meals Could Make Asthma Worse

British researchers presenting at the 2010 American Thoracic Society International Conference suggest asthma patients should be advised to forego high-fat meals. They studied 40 patients who were randomized to receive either a high-fat, high-calorie meal containing about 1,000 calories (52% of which were from fat), or a low-fat, low-calorie meal containing about 200 calories and 13% fat. Sputum samples collected before the meal and four hours afterward were analyzed for inflammatory markers.

Compared to those who consumed the low-fat meal, patients who consumed the high-fat meal had a marked increase in airway neutrophils and TLR4 mRNA gene expression (a cell surface receptor activated by nutritional fatty acids that leads to the release of inflammatory mediators). They also had a reduced bronchodilator response as measured by FEV_1 percent predicted and FEV_1/FVC. "This is the first study to show that a high-fat meal increases airway inflammation, so this is a very important finding," notes study author Lisa Wood, PhD. "The observation that a high-fat meal changes the asthmatic response to albuterol was unexpected as we hadn't considered the possibility that this would occur." ■

Web Watch

Helping Young Smokers Quit, a national program of the Robert Wood Johnson Foundation directed by researchers from the University of Illinois at Chicago, has just launched a new online toolkit to help health care providers and educators who run tobacco dependence treatment programs for young people evaluate how well they are doing. www.HYSQ.org allows users to see how their programs compare with a national sample, and it also includes surveys they can use to gather information from participants in their own programs, along with tools to create reports from pre-program, post-program, and follow-up surveys and suggestions on interpreting results. ■

Medical Mission Gets Retired RT Back in the Game

Dilshad Merchant shows a couple of the souvenirs she brought back from her trip to Africa.

Dilshad Merchant, MS, RRT, CPFT, retired last fall after 29 years in the respiratory care profession, most of them spent as manager of respiratory care services and the Lung Center at Morton Plant Hospital in Clearwater, FL. Shortly after the first of the year, however, she was back in the game, traveling to Kenya and Tanzania to teach respiratory care to nurses and physicians.

"In February 2010 four nurses and myself traveled to Tanzania to conduct a critical care course for physicians and nurses in Dar es Salaam — 'DAR' for people who live there," says the AARC member. "The course was organized by the Aga Khan Hospital, and the team was sponsored by the Ismaili Health Professional Association in the USA. Since I was going to that area, the nurses at the Aga Khan Hospital in Nairobi invited me to teach a short respiratory care course for their nurses and allied health professionals."

Merchant put together a full-day course for the Nairobi presentation, covering everything from respiratory assessment and oxygen therapy to invasive and noninvasive ventilation. Her connections within the AARC Management Section were a big help. "Thanks to some of the PowerPoints shared by Management Section members, I did not have to reinvent the wheel," she says now. She presented the course four times to groups of about 20–24 clinicians each.

In DAR, Merchant worked with her nursing colleagues to develop a more comprehensive and structured course. "We had 45 physicians and nurses attend a six-day course on critical care," says the RRT. "There were skills stations every day so that the participants could get some hands-on training." Most of the attendees came from towns in the general vicinity, although some traveled from as far away as Nairobi. In her spare time, Merchant trained two ICU nurses to serve as respiratory resource nurses as well.

Merchant says the hospitals she visited while in the two countries were a study in contrasts. "The hospital in Nairobi is a large tertiary care hospital affiliated with the Aga Khan University and nursing school," she notes. "I was impressed with their 'VIP' wing because it was like a fancy hotel." The facility has a modern NICU and pediatric wing as well, and she found the nurses to be very progressive and involved. "They are preparing for Joint Commission International accreditation, which is the international arm of The Joint Commission here in the United States, and are aspiring for 'Magnet' recognition," says Merchant. "In their ICU I saw posters of the Institute for Healthcare Improvement's recommendation to reduce ventilator-associated pneumonia. All this was so familiar!"

The Aga Khan Hospital in Tanzania was much smaller — just 80 beds — and not as well equipped as the Nairobi facility, but Merchant says much progress had been made since her last visit to the country in 2008, in that the eight-bed ICU has air conditioning now and they have purchased two ventilators. The physicians still don't use noninvasive ventilation, but Merchant took them a step closer by rigging a set-up to demonstrate bi-level positive airway pressure (PAP) with a mask and continuous PAP on a patient with a tracheostomy.

The dedication of the clinicians she met during her stay will leave a lasting impression. "One of the nurses I trained traveled for two hours each way, yet she was always in class by 8 a.m. and stayed till 8 p.m. most days to learn as much as she could," says Merchant. "They are very proud of their accomplishments." ■

▶Transitions

Gina Spinuzzi, RRT, AE-C, has been appointed to the National Asthma Educator Certification Board. Spinuzzi is a respiratory therapist at Parkview Medical Center in Pueblo, CO, where she teaches Asthma 101 and Huff-n-Puff classes. (Photo 1)

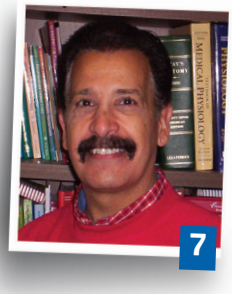
Lester Cash, RRT, has been named director of respiratory care and outpatient services at St. Anthony Hospital in Oklahoma City, OK. In his new position he will oversee respiratory therapy, sports medicine, physical therapy, and the Hand Center. (Photo 2)

Retired Col. William N. Bernhard, MD, is back on active duty and serving at the Hohenfels Health Clinic as the soldier readiness doctor and flight surgeon for aviators stationed in Bavaria. Dr. Bernhard's purpose in returning to active duty is to arm soldiers against post-traumatic stress disorder (PTSD). "It is a crusade," he says. "I want the Army to do a better job in preventing or lessening the signs and symptoms of PTSD because it is so debilitating." (Photo 3)

Julie Weidemann, BS, CRT, was elected president of the Midwest Association of Medical Equipment Services at the organization's spring convention held in Omaha, NE. Weidemann is the director of Palmer Home Medical Supply, serving Northeast Iowa. (Photo 4)

Brenda Barger-Saunders earned first place in the John Rogers Memorial Scholarship competition sponsored by the Missouri Society for Respiratory Care. Her winning literature review was titled "Systemic Sclerosis Associated Pulmonary Arterial Hypertension." Barger-Saunders is a student in the respiratory care program at Missouri Southern State University in Joplin. (Photo 5)

Henry Oh, PhD, RRT-NPS, MT, CLC, has been appointed to the New Mexico Respiratory Care Advisory Board by Gov. Bill Richardson and has also just been named a 2010 Teacher of Honor by Kappa Delta Pi, the International Honor Society in Education. Dr. Oh is currently the program director and assistant professor of respiratory therapy at San Juan College in Farmington, NM. He also sits on the Lambda Beta Society Executive Board and is president of the New Mexico State Society of American Medical Technologists. (Photo 6)



Jose Quinones, MS, RRT-NPS, RPFT, has received the State University of New York Chancellor's Award for Excellence in Teaching. Quinones is chair of the respiratory care program at Westchester Community College in Valhalla, NY. (Photo 7)

Luther Jay Platt, Sr., RRT, passed away in April at the age of 96. One of the first 100 Registered Respiratory Therapists in the country (RRT #92), Platt enjoyed a long and rewarding career in the profession, beginning with his attendance at the third AARC annual meeting in Cleveland, OH, in 1957 and continuing until his retirement from Little Company of Mary Hospital in Evergreen Park, IL, in 1978.

Platt is survived by his son, David Platt, MS, RRT, marketing director at Bunnell Incorporated in Salt Lake City, UT. Jay Platt was featured in the October 2004 issue of *AARC Times*, where he told his life story in the respiratory care profession. (Photos 8 & 9)

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

Three RC Programs Combine Efforts in Student Boot Camp

by Melanie McDonough, MS, RRT

Melanie McDonough believes the student boot camp is helping to prepare students for the next phase in their career.

The respiratory therapy student boot camp in Orlando, FL, is a two-day, comprehensive program co-hosted by the University of Central Florida, Valencia Community College, and Seminole State College of Florida. The goal is to provide upcoming graduates with important information relevant to licensure, jobs, and technical issues related to our profession. Each program graduates approximately 20 to 25 students a year, and they are all required to participate.

The three programs here in Central Florida have a long history of working closely together. We share clinical sites, laboratory space, and sometimes instructors. Several years ago, we were discussing the multitude of things that our students need to know to succeed outside the hallways of school. We realized that we were all providing the same information, and the idea for the student boot camp was born. It made sense: This collection of students would soon belong to the same group of licensed respiratory therapists in our community, and we wanted to bring them all together.

The camp is configured much like a continuing education conference, minus the CEUs. This gives the student participant an opportunity to experience a seminar atmosphere. We also ensure that the students receive all of the mandatory education they need to qualify for state licensure. In the state of Florida, minimum requirements for initial RT licensure application consist of three hours of HIV education, two hours of emergency preparedness, and two hours of medical error prevention. These seven hours are included in the boot camp.

Each of our medical directors also speak on topics they believe are important for new therapists. Subjects such as COPD, cystic fibrosis, trauma resuscitation, and high-frequency oscillation are some examples. Other local physicians and respiratory professionals are invited to speak as well. Information is presented on resumé writing, interviewing, professionalism in the workplace, and membership in state societies and national associations. Also provided is information on the NBRC testing procedure and licensure application. Local hospital systems usually provide breakfast and do small presentations on the job outlook at their facilities. Evaluation surveys determine the effectiveness of the program.

The boot camp has been organized and managed by the directors of clinical education at the three respiratory therapy programs. It has never been difficult to find speakers willing to en-

Melanie McDonough (left) with (from left) Valencia Community College Program Director Jamy Chulak, BS, RRT; Valencia Director of Clinical Education Kim Harvey, BS, RRT-NPS; and Seminole State College Clinical Director Michael Santiago, MEd, RRT.

gage with the students, and we've been fortunate to have physicians who generally love to share their knowledge. We probably have enough interest to expand to a three-day seminar, but thus far have not made that leap. We thoroughly enjoy putting this program together and providing such invaluable information to our new colleagues. ■

Melanie McDonough is director of clinical education and an instructor in the cardiopulmonary sciences program at the University of Central Florida in Orlando.

Students from all three colleges enjoyed getting together for the two-day session.

Does Asthma Lower Cancer Risk?

A population-based study carried out in Montreal among 3,300 male cancer patients and a control group of 500 men without cancer finds men with asthma were less likely to develop stomach cancer and that men with eczema had a lower risk for lung cancer. The researchers attribute the finding to a theory that the hyper-reactive immune systems of people with asthma and allergy might enhance the body's ability to remove malignant cells. "We cannot fully explain why allergic conditions can decrease cancer risk, but this research is promising," allergist Jonathan Bernstein, MD, was quoted as saying. "We hope future studies continue to explore this connection and the role the immune system plays in reducing cancer risk." The study appeared in the May issue of the *Annals of Allergy, Asthma & Immunology*. ■

COPD Exacerbation Linked to Heart Attacks

Here's another reason to keep your COPD patients healthy and out of the hospital: A new study out of the United Kingdom finds the risk of both myocardial infarction (MI) and ischemic stroke goes up following an acute exacerbation of the disease. The results were based on 25,857 patients. Overall, 524 MIs were identified in 426 patients and 633 ischemic strokes in 482 patients. Exacerbation rates were significantly higher in patients experiencing MI or stroke, and there was a 2.27-fold increased risk of MI one to five days after a COPD exacerbation and a 1.26-fold increase of stroke one to 49 days after a COPD exacerbation. The study appeared in the May issue of CHEST. ■

Study: Why Patients Ditch Their Meds

Why do some patients stop taking their prescription medications? CVS Caremark recently supported a study carried out by Minds at Work of Cambridge, MA, to find out. Extensive interviews with patients who reported stopping their medications despite wanting to follow physicians' orders revealed:

- 24% came to see that taking prescribed medications interfered with personal priorities like taking care of family members, compromised social aspects of their lives, or was just another in a long line of chores.
- 21% came to see that taking their medicine made them feel like they were losing control of their lives; by stopping their medicine some felt they were resisting authority.
- 17% felt taking medicine gave them an unfavorable identity or made them feel old, or they wanted others to view them in a more favorable light.
- 16% felt they knew better than their physicians what was good for them; some believed they should take care of their health through exercise and diet.
- 16% were wary of the health care and pharmaceutical industries and did not want to become dependent on medications or suffer unknown side effects.
- 6% did not want to change their personal routines, so they simply put off taking their medications. ■

The Ramifications of Using an Expired Credential

by Lori M. Tinkler, MBA

Beginning with credentials issued July 1, 2002, the Continuing Competency Program (CCP) was put in place to assure the public and others that individuals credentialed by the National Board for Respiratory Care (NBRC) continue to demonstrate a level of excellence in professional knowledge, skills, and abilities as respiratory therapists and pulmonary function technologists. The purpose behind the CCP is to establish standards by which continued competency of credentialed practitioners working in defined areas of respiratory care, including assessment, may be determined. The CCP was designed to enhance and contribute to the continued competence of credentialed respiratory therapists and pulmonary function technologists, as well as demonstrate concern for patient safety. Most individuals required to participate in the program have successfully renewed their national credentials issued by the NBRC by providing evidence that they continue to meet current standards of practice. However, there are some credentialed practitioners who have not complied with the program requirements and their hard-earned credentials have expired.

What happens when a credential expires?

When a credential expires, it generally indicates that the practitioner has not taken steps to comply with the CCP requirements to maintain the credential. Either the practitioner has not retaken and passed the respective examination for the highest credential held, has not taken and passed a new NBRC credentialing examination, or has not provided proof of completion of a minimum of 30 hours of Category I Continuing Education (CE) acceptable to the NBRC. Once a credential expires, the practitioner's updated status is listed in the online Directory, indicating that the held credential has expired. The practitioner will no longer be able to use the credential designation. The effect of allowing a credential to lapse can be widespread.

What does an expired credential mean to you?

An expired credential means that unless steps are taken to reinstate the credential, the practitioner is no longer recognized as holding the national designation. For those allowing their CRT credential to expire, a practitioner's lapsed credential may violate their licensure status, causing the state to re-evaluate whether the practitioner has violated the terms of licensure by no longer holding the national credential. This may cause a practitioner to lose their license to practice respiratory care in their state.

No longer holding an NBRC credential may affect a practitioner's status in the workplace. For example, employers who require the NBRC's Neonatal/Pediatric specialty credential may not allow a practitioner to continue to work in a pediatric setting. Therapists who no longer hold the CRT credential will lose the ability to become eligible for the RRT credential. Additionally, organizations requiring the advanced-level RRT credential as a condition of employment may re-evaluate the nature of a respiratory therapist's employment, or consider adjusting the pay scale for any employee not meeting predetermined professional requirements for respiratory care practitioners.

The NBRC's national credentials are recognized by all states that have enacted legislation to regulate respiratory care practice and form the basis for reciprocity, mak-

about the author...

Lori M. Tinkler, MBA, is the associate executive director of the National Board for Respiratory Care in Olathe, KS.

NBRC Update: Expected Graduation Provision To Be Eliminated

The NBRC Board of Trustees unanimously approved on two readings, as required by its Bylaws, to eliminate the Expected Graduation Provision for the Certification Examination for Entry Level Respiratory Therapists (CRT) effective Jan. 1, 2011. This provision currently allows individuals enrolled in accredited respiratory care education programs to apply for and attempt the CRT Examination 30 days prior to actual graduation. Examination results are held until the individual's graduation date is confirmed.

Effective Jan. 1, 2011, all applicants for the CRT Examination must provide proof of graduation when applying for the examination, either electronically or via the Electronic Eligibility Database (EED) or by submission of an official transcript or certificate of completion/graduation by the candidate. Candidates will not be eligible to schedule their examination appointment until proof of graduation is provided by either the accredited education program or candidate. ■

ing it easy for individuals to move from one state with licensure to another. Losing the national recognition places the burden of proof on each practitioner seeking licensure to demonstrate to any state licensing agency they have met the basic requirements to enter the profession in that state.

For those who continue to use their credential designation once it expires, the ramifications are severe. The NBRC's Judicial and Ethics Policies prohibit the unauthorized use of a Certification or Registry certificate, or falsification of credentials or any other NBRC documents. Simple acts such as signing a medical chart using an expired credential designation, listing the expired credential as part of professional identification, and submitting job applications referencing an expired credential as current are all prohibited and can result in disciplinary action. While the consequences from a lapsed credential can be severe, there are ways a practitioner can minimize the resulting negative impact.

What can you do to prevent an expired credential?

The NBRC has made a commitment to support and help the thousands of practitioners who hold an NBRC credential and are subject to this program. From the time a newly credentialed respiratory therapist or pulmonary function technologist receives the certificate packet, they are provided information about the importance of their credential, the value it brings to their professional development, and the requirements necessary to maintain it. Credentials awarded by the NBRC on or after July 1, 2002, are valid for a period of five years. The five-year period is calculated from the end of the calendar month in which the credential is earned.

Keep your contact information current

Keeping in touch with the NBRC is an important step for complying with CCP requirements. To ensure that communications regarding credentials are sent to the correct address, all credentialed practitioners are encouraged to create a log-in profile on the www.nbrc.org website and keep all contact information up to date. The NBRC mails a reminder to individuals about their upcoming expiration date one year, six months, 90 days, and 30 days before a credential expires.

Plan your compliance

The NBRC intends for compliance with the CCP to be as seamless of a process as possible. Completion of continuing education credit is intended to coordinate with the requirements of state licensure agencies. Individuals can use AARC's CRCE credit to satisfy NBRC CCP requirements, as well as continuing education hours that fulfill state licensing requirements. CEUs must be logged online on the NBRC website. For more information about recredentialing by passing an examination, the NBRC Candidate Handbook and the NBRC website (www.nbrc.org) contain a wealth of information to assist in complying with the CCP via this route.

Keep updated on your credentialing and licensing requirements

Instructions about the CCP process and information about the importance of maintaining credentials have

been sent to numerous respiratory care department directors and human resource professionals so they can provide additional support to their credentialed employees. Other evidence of the NBRC's support for individuals participating in the CCP is our responsiveness to the credentialed community we serve. Effective January 2009, the CCP Policy was updated so that the fee is now determined by only requiring $25 for each inactive renewal period during the five-year credential term. For example, an individual who renews their active status in three of the five years will pay a CCP fee of $50 (two inactive years x $25). A practitioner who keeps their status active in all five years of the credential term will not pay an additional fee to participate in the CCP, using the CEU route of renewal.

Additionally, credentials that expired starting in January 2009 may be reinstated by submitting continuing education (CE) information and payment of $250 online through the NBRC website within six months of the credential expiration date. CE hours entered must have been achieved during the five-year credential term. Any CEUs achieved after the expiration date will not be accepted. Participating in the Continuing Competency Program and maintaining active status with the NBRC ensures one's national credential continues to have value and meaning.

Where to go for more information

More detailed information regarding compliance with the CCP can be found on the NBRC website, www.nbrc.org. For questions about how a change in credential status, such as expiration, may affect employment, practitioners are encouraged to speak with their employer. Additionally, how credential status may affect a state-issued license to practice should be addressed by the individual's state licensure agency. A directory of these agencies can be found at www.nbrc.org/StateLicensure/AgencyDirectory/tabid/54/Default.aspx.

The NBRC Board of Trustees and its committees are interested in your questions, comments, and concerns regarding the Continuing Competency Program and the compliance process. You may contact the NBRC at 18000 W. 105th St., Olathe, KS 66061-7543, by e-mail at nbrc-info@nbrc.org, by phone at (913) 895-4900, or visit the NBRC website. ■

BE A PART OF THE AARC NOW!

Your Membership Makes A Difference

ACTIVE MEMBER

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

ASSOCIATE OR SPECIAL MEMBER

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

STUDENT MEMBER

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

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

Membership Application

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

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

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

Last Name _____ First Name _____

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

City _____ State _____ Zip _____

Phone No. (_____) _____ Email Address _____

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

Work Information: Place of Employment _____

Address _____ City _____

State _____ Zip _____ Phone No. (_____) _____

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

Preferred Mailing Address: ☐ Home ☐ Business

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

For Student Member (Required)

School/RC Program _____ Address _____

City _____ State _____ Zip _____

Phone No. (_____) _____ Program Director _____

Expected Date of Graduation Month _____ Year _____

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

Primary Job Responsibility (check one only)

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

Type of Business

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

Check the Highest Degree Earned

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

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

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

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

Date of Birth _____ **Sex** _____

AMERICAN ASSOCIATION FOR RESPIRATORY CARE

AARC An Excellent Investment

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

PLEASE SIGN

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

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

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

Signature _____ **Date** _____

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

Membership Fees (U.S. dollars only)

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

Choose One Level of Membership

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

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

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

Or

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

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

Or

AARC PLUS MEMBERSHIP (All publications and other special benefits)

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

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

Or

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

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

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

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

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

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

Payment Information

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

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

Card Number _____ Card Expires _____ /_____ Signature _____

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

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

Thanks for Being Part of the Team

Revised May 2010

New Members

Welcome to the AARC

U.S. Members

A

Donald, Aldeanna, Oxford, Al*

Barber, Kelly, Benton, Ar
Clack, Larry, Fayetteville, Ar*
Clements, Tyler, Mt Home, Ar
Craven, Ryan, Conway, Ar
Cutliff, Tamisha, Little Rock, Ar
Franklin, Georgianna, Jacksonville, Ar
Galmore, Erica, Little Rock, Ar
Hankins, Lisa, Ward, Ar*
Herring, Laura, Conway, Ar
Hilton, Alicia, Sherwood, Ar
Ifill, Jason, Little Rock, Ar
Johnson, Chanta', Little Rock, Ar
McDonald, Janice, Mabelvale, Ar
Miller, Latonya, Little Rock, Ar
Nesselrodt, Brittnie, North Little Rock, Ar
Ogden, Michelle, Maumelle, Ar
Oswald, Robert, Jacksonville, Ar
Page, Christine, Little Rock, Ar
Patterson, Christina, North Little Rock, Ar
Privitera, Gwen, North Little Rock, Ar
Rector, Cassandra, Little Rock, Ar
Rector, Chere, Little Rock, Ar
Wood, Kimberly, Mammoth Spring, Ar

Aceves, Susan, Oro Valley, Az
Aguirre, Carlos, Tucson, Az
Anderson, Larry, Chandler, Az
Aquirre, Jennifer, El Mirage, Az
Armstrong, Suchanart, Phoenix, Az
Arnold, Shilah, Sun City West, Az*
Barnes, Julie, Tucson, Az
Batiste, Ashley, Phoenix, Az
Begay, Denise, Phoenix, Az
Bertolotti, Kacie, Tucson, Az
Bilton, Tahra, Phoenix, Az
Bradley, Brooks, Tucson, Az*
Bradshaw, William, Phoenix, Az
Brasted, Anne, Gilbert, Az
Buchanan, Araceli, Phoenix, Az
Castillo, Mariel, Phoenix, Az
Castro, Hope, Tucson, Az
Clifton, Roxanne, Phoenix, Az
Colosimo, Josephine, Tucson, Az
Connelly, Kelsey, Tucson, Az
Cushing, Wendy, Tucson, Az*
Davenport, Tracey, Tucson, Az
Davies, Evan, Glendale, Az
Duarte, Cynthia, Tucson, Az
Foster, Kelly, Gilbert, Az
Frieband, Ted, Phoenix, Az*
Fudail, Aswad, Phoenix, Az
Garza, Stacey, Florence, Az*
Hammel, Rebecca, Tucson, Az
Hines, Angelia, Red Rock, Az
Jimenez, Stephanie, Phoenix, Az
Johnson, Ryan, Mesa, Az*
Khan, Dorian, Goodyear, Az
Kindig, Casey, Scottsdale, Az
Kinnard, Michael, Tucson, Az
Landavaso, Gianna, Tucson, Az
Link, Curtis, Litchfield Park, Az
Lopez, Francisco, Tucson, Az
Marino, Jonathan, Phoenix, Az
Marsden, Rachel, Phoenix, Az
Marshaw, Kathy, Tempe, Az
Martinez, Sarah, Tempe, Az
McHatton, Ruth, Glendale, Az
Mendoza, Adolfo, Tucson, Az
Mesaros, Gabriel, Peoria, Az
Miller, Catherine, Tolleson, Az
Miller, Jennifer, Avondale, Az
Molina, Ruben, Phoenix, Az
Munoz, Jessica, El Mirage, Az
Nabors, Andrew, Glendale, Az*
Nassi, Debbie, Phoenix, Az
Neely, Naomi, Tucson, Az*
Nielsen, Angela, Sahuarita, Az
Pinto, Steve, Phoenix, Az
Riesgo, Susanna, Tucson, Az
Ringle, Meghan, Phoenix, Az
Rocha, Gabriela, Tucson, Az
Rubio, Alberto, Phoenix, Az
Sanchez, Denise, Rio Rico, Az
Schubeit, Christopher, Phoenix, Az
Shirey, Michael, Kingman, Az*
Snodderly, John, Mesa, Az
Steubing, John-Mark, Peoria, Az*
Tat, Connie, Tucson, Az
Texeira, Julien, Peoria, Az
Thilges, Jocelyn, Peoria, Az
Toddie, Shanterah, Tucson, Az
Witas, Gulnora, Tucson, Az*
Wolf, Michele, Mesa, Az
Woods, Kirstin, Tucson, Az*

C

Abas, Julie Ann, San Diego, Ca
Abelyan, Liana, Los Angeles, Ca*
Ahluwalia, Jaspreet, Manteca, Ca*
Ahmed, Omer, San Diego, Ca
Araga, Raleigh, Long Beach, Ca*
Barrera, Jeanette, Vacaville, Ca*
Becher, Alison, Anaheim, Ca*
Bisgaard, James, Petaluma, Ca*
Bui, Hong, Westminster, Ca
Cheung, Allen, San Gabriel, Ca*
Ching, Leeton, Chowchilla, Ca
Clark, Michelle, Roseville, Ca
Connaughton, Amanda, Napa, Ca*
Crawford, Rhonda, Yuba City, Ca*
Deb, Papri, Milpitas, Ca
Diaz, Christopher, Chula Vista, Ca
Donato, Joie, Chula Vista, Ca*
Dulalia, Audel, Chino, Ca*
Fazio, Richard, Antelope, Ca*
Fritschle, Scott, Beverly Hills, Ca*
Galguerra, Jerwin, Riverside, Ca
Garcia, Joshua, San Jose, Ca*
Gilbert, Michael, Imperial, Ca*
Glesener, Mary T, Fairfield, Ca*
Gudeta, Bethelihem Gudeta, San Jose, Ca, Ca
Hakakian, Liora, Beverly Hills, Ca*
Hernandez, Denise, Lynwood, Ca
Hirsch, Deborah, Lawndale, Ca
Huston, Aleen, Fresno, Ca*
Ichull Ingya, Joseph, Spring Valley, Ca
Johnson, Crystal, Modesto, Ca*
Kiraly, Maria, Murrieta, Ca*
Krell, Marilyn, Yorba Linda, Ca*
Lee-Pearl, Jacquelyn, Los Angeles, Ca
Mason, Stefanie, Stockton, Ca*
McDonald, Travis, San Jose, Ca
Michael, Cheryl, San Diego, Ca
Moor, Stephanie, Modesto, Ca
Motts, Eric, Fort Bragg, Ca*
Newton, Melinda, Costa Mesa, Ca*
Onyenuforo, Nduka, Los Angeles, Ca
Portner, Scott, Santa Rosa, Ca*
Ramirez, Rose, San Diego, Ca
Revilla, William, Clovis, Ca
Serna Flood, Deeanna, North Hollywood, Ca*
Sevilla, Arthur, Menlo Park, Ca*
Stiger, Patricia, Orange, Ca*
Theumer, Kurt, San Carlos, Ca*
Turpin, Joyce, Lakeside, Ca
Valmonte, Donald, San Diego, Ca*
Webb, Quentell, Hawthorne, Ca
Williams, Caroline, Bakersfield, Ca
Wu, Yuaner, San Mateo, Ca*

Armendariz, Aaron, Englewood, Co*
Christopher, Melinda, Craig, Co*
Haptonstall, Monica, Morrison, Co*
Jelinskiq, Theresa, Pueblo, Co*
Johnson, Amber, Aurora, Co*
Lolley, Lisa, Littleton, Co*
Martinez, Carol, Westcliffe, Co
Meyer, Christopher, Denver, Co*
Morgan, Leslie, Highlands Ranch, Co*
Nguyen, Erin, Frisco, Co*
Noble, Brian, Highlands Ranch, Co*
Nyblom, Bruce, Montrose, Co*
Reinicke, Andrea, Englewood, Co*
Scalzo, William, Arvada, Co*
Touch, Sokuntyrath, Denver, Co*
Webb, Dawn, Denver, Co*
Zimmerman, Virginia, Lamar, Co*

Dineen, Judith, Hamden, Ct*
Edwards, John, Southington, Ct*
Frank, Lauren, West Hartford, Ct*
Grabowski, Kelly, Canton, Ct*
Lowerre, Meredith, East Hartford, Ct*
Nicholas, Janet, Stratford, Ct*
Rearick, Justin, South Windsor, Ct*
Soule, Susan, West Haven, Ct*

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

D

Andre Cadet, Fabiola, Washington, DC

F

Alli, Andre, Tampa, Fl
Andes, Lora, St Petersburg, Fl*
Bazelais, Marcia, Oviedo, Fl*
Bencsik, Jennifer, Cooper City, Fl*
Berry, Brandon, Reddick, Fl
Blakeslee, Rebecca, Gainesville, Fl
Blanchard, Glen, Alachua, Fl
Blouch, Dietra, Bradenton, Fl
Bonacic, Mark, Apopka, Fl*
Bryan, Whitney, Lake City, Fl
Bullen, Elnora, Daytona Beach, Fl
Cadette, Marie, Gainesville, Fl
Casiano, Amanda, Gainesville, Fl
Catlett, Tami, Jacksonville, Fl
Chapman, Holly, Eustis, Fl
Christensen, Rivera, Jacksonville, Fl
Christopher, Pamela, High Springs, Fl
Clark, Stephanie, Callahan, Fl*
Clements, Mary, Plant City, Fl
Colbert, Amy, Tampa, Fl
Conley, Teisha, Fort White, Fl
Craine, Catherine, Oviedo, Fl
Cusic, Kelli, Lakeland, Fl
Dunlap, Robert, Gainesville, Fl
Durrette, Kelly, Orange Park, Fl
Fernandez, Karen, Kissimmee, Fl
Flanagan, Kevin, Sebastian, Fl*
Flanagan, Sherrie, Sebastian, Fl*
Fletcher, Powell, Spring Hill, Fl*
Foster, Sayra, Edgewater, Fl*
Gallagher, Stacy, Tampa, Fl
Gallego, Robert, Fort Myers, Fl*
Geske, Andrea, Gainesville, Fl
Gibbs, Rebecca, Dunnellon, Fl
Gocio, Amber, Gainesville, Fl
Gomez, Liuba, Tampa, Fl
Goodson, Donna, Tampa, Fl
Guerrier, Carline, Royal Palm Beach, Fl*
Haines, Jerri, Lake City, Fl
Hall, Phyllis, Lake Hamilton, Fl*
Harris, Clydina, Gainesville, Fl
Hoffman, Thomas, Deland, Fl*
Igbinosun, Anthony, Tampa, Fl*
Jennett, Jeffrey, Auburndale, Fl
Jones, Sierra, Cocoa, Fl
Kircher, Jean, Keystone Heights, Fl
Koffman, Jessica, Gainesville, Fl
Lewis, Alysha, Gainesville, Fl
Lewis, Timothy, Gainesville, Fl
Masson, Yumilka, Alachua, Fl
McCue, Rich, Gainesville, Fl
Merriex, Keturah, High Springs, Fl
Metellus, Magdalie, Tampa, Fl
Millsap, Lathisha, Brandon, Fl
Mulligan, Ann Marie, Newberry, Fl
Nelson, Demetra, Tampa, Fl
Perry, Diane, Port Richey, Fl
Philias, Nirva, Miami Gardens, Fl*
Pierre-Louis, Gerdine, Lauderhill, Fl
Ray, Monica, Fort White, Fl
Roberts, Ronald, Jacksonville, Fl*
Rogers, Dawn, Apopka, Fl
Rush, Tiffany, Tallahassee, Fl*
Sadr, Kamel, Spring Hill, Fl
Salvant, Giddel, High Springs, Fl
Santos, Maria Cristina, Sunrise, Fl*
Savage, James, Panama City, Fl*
Segrest, William, Lake City, Fl
Shepherd, Joseph, Orlando, Fl*
Snelling, Angela, Tampa, Fl
Studstill, Jennifer, Chiefland, Fl
Sullivan, Natalie, Starke, Fl
Taylor, Pamella, Panama City, Fl*
Tindale, Amber, Chiefland, Fl
Valentine, Shakesa, Gainesville, Fl
Villafana, Johann, Kissimmee, Fl*
Wade, Ted, St Petersburg, Fl*
Walker, Robin, Land O Lakes, Fl
Webb, Michelle, Tampa, Fl

G

Adams, Delbert, Marietta, Ga*
Allen, Lateisha, Savannah, Ga*
Allen, Stacie, Atlanta, Ga
Andrews, Robert, Maxeys, Ga*
Barnette, Lynette, Loganville, Ga
Beck, Kelli, Sylvester, Ga
Belancourt, Marie, Peachtree City, Ga
Bellefleur, Anne, Douglasville, Ga
Bennett, Olatunji, East Point, Ga*
Blake, Mia, Atlanta, Ga*
Bobo, Prince, Atlanta, Ga
Brown, Valerie, Newnan, Ga*
Clark, Lindsey, Willacoochee, Ga*
Clarke, Sharon, Columbus, Ga*
Cooper, Kevin, Summerville, Ga*
Davis, Kathleen, Silver Creek, Ga*
Debord, Diane, Douglasville, Ga*
Dees, Veronica, La Fayette, Ga*
Delete, Delete, Augusta, Ga*
Devine, John, Gainesville, Ga*
Dowell, Kimberly, Atlanta, Ga
Dudek, Robert, Snellville, Ga*
Eidson, Meggan, Alpharetta, Ga
Epps, Jasmine, Stone Mountain, Ga
Evans, Erin, White, Ga*
Faye, Laura, Decatur, Ga
Fields, Leonard, Stone Mountain, Ga
Flanders, Adrean, Willacoochee, Ga*
Gayle, Rosalyn, Snellville, Ga
Gill, Dawn, Blackshear, Ga*
Hariprsaud, Leerona, Grayson, Ga
Henry, Michael, Austell, Ga*
Holmes, Christopher, Conyers, Ga
Horton, Sandra, Dublin, Ga*
Isac, Santhosh, Lawrenceville, Ga
James, Brittany, Hoboken, Ga*
Johnson, Nina, Conyers, Ga
Lang, Eboneyuhura, Lithonia, Ga
Lattimore, Rickie, Alpharetta, Ga
Loughmiller, Carolann, Sugar Hill, Ga*
Lucson, Joseph, Stone Mountain, Ga*
Marquez Ortega, Karem, Duluth, Ga
Massey, Stuart, Snellville, Ga*
Mitchell, Sandra, Monticello, Ga
Montelongo, Rebecca, Palmetto, Ga
Mullis, Thomas, Mlledgeville, Ga
Myers, Russ, Loganville, Ga*
Nunn, Tamika, Ellenwood, Ga
Oliver, Camille, Leesburg, Ga*
Orr, Towana, Snellville, Ga*
Parker, Ebony, Union City, Ga
Patterson, Katherine, Augusta, Ga*
Perkins, Christopher, Macon, Ga*
Riley, Jean, Macon, Ga*
Robinson, Richard, Evans, Ga*
Shelton, Melissa, Social Circle, Ga*
Shiver, Joel, Hoschton, Ga*
Smalls, Laquisha, Atlanta, Ga
Smith, Darion, Columbus, Ga
Smith, Nicole, Lawrenceville, Ga*
Stallworth, Aleshia, Marietta, Ga*
Stephens, Trinita, College Park, Ga
Taylor, Dawn, Griffin, Ga*
Taylor, Jamyla, Stone Mountain, Ga
Telfair, Lakesha, Stone Mountain, Ga
Tomlinson, Heath, Adel, Ga*
Wagner, Treena, Columbus, Ga*
Walton, Bridgette, Augusta, Ga*
Wattkis, Leslie, Conyers, Ga*
Whatley, Henry, Lake Park, Ga*
Whipple, Charlotte, Springfield, Ga*
Wilson, Teresa, Jonesboro, Ga*

H

Jones, Damond, Ewa Beach, Hi

I

Bielefeld, Sherry, Mason City, Ia*
Dahlstrom, Susan, Mason City, Ia*
Eddy, Heidi, Des Moines, Ia*
Else, Claudia, Toledo, Ia*
Faust, Linda, Independence, Ia*
Johnson, Jessica, Estherville, Ia*
Medeiros, Yarden, Council Bluffs, Ia*
Moffitt, Jerry, Elkhart, Ia*
Ribeiro, Richard, Urbandale, Ia*
Sealman, Martha, Grundy Center, Ia*
Spiesz, Allison, Mount Pleasant, Ia*
Sprau, Jacquelene, Ames, Ia*
Stark, Sandy, Mason City, Ia*
Ulbelohde, Catherine, Waterloo, Ia*

Bak, Jacob, Boise, Id
Bromley, Ann, Caldwell, Id*
Cleveland, Nicolette, Boise, Id
Coder, Cortni, Boise, Id
Cooper, Lori, Kuna, Id*
Eden, Wendy, Boise, Id
Gallegos, Jacob, Pocatello, Id*
Hewlett, Linda, Meridian, Id*
Hoover, Daniel, Kuna, Id
Huff, Joleen, Meridian, Id
Lapp Webber, Rebecca, Kuna, Id
Latthamone, Nong, Boise, Id
Leclair, Cheryl, Ammon, Id*
Martin, Webber, Boise, Id
McNamare, David, Boise, Id
Moffis, David, Caldwell, Id
Nilsson, Krystal, Caldwell, Id
Pickren, Michael, Boise, Id
Riley, Nancy, Boise, Id*
Smith, Christopher, Lewiston, Id*
Snider, Julie, Boise, Id*
Trejo, Alva, Boise, Id*
Washington, Antonio, Nampa, Id
Wasnea, Alicia, Meridian, Id*
Weeks, Bev, Boise, Id*

Bonilla, Marcela, Chicago, Il
Brown, Dominique, Chicago, Il
Bundu, Elizabeth, Chicago, Il
Calma, Franco, Chicago Ridge, Il
Chambers-Jones, Angela, Chicago, Il
Chirayil, Mathew, Glenview, Il*
Chorek, Carmen, Chicago, Il
Ciszewski, Michelle, Frankfort, Il*
Cotie, Chris, Ashton, Il
Dragomir, Mariana, Chicago, Il
Eberhart, Mary, Bethalto, Il*
Eggert, Mary, Merrionette Park, Il
Espinoza, Terry, Sauk Village, Il
Fluellen, Chanda, Cicago, Il
Fultz, Jennie, Darien, Il
Gallagher, Cindy, Hickory Hills, Il
Gallegos, Sergio, Chicago, Il*
Gayden, Marquita, Chicago, Il
Graham-Aguayo, Danielle, Oak Lawn, Il

Hanton, Ashley, Oak Forest, Il
Harps, Ricky, Fairview Height, Il*
Henry, Jennifer, Chicago, Il
Hollister, Richard, Chicago, Il*
Horton, Debra, Scheller, Il*
Jackson, Carolyn, Markham, Il*
Johnson, Daniel, Crete, Il*
Johnson, Tyler, Libertyville, Il
Kauffman, Tyler, Cadwell, Il
Lawrence, Yolanda, Chicago, Il
Mayar, Sohrab, Gurnee, Il
Paliferro, Michelle, Melrose Park, Il
Paul, George, Addison, Il*
Ponomar, Marina, Streamwood, Il
Prindable, Pamela, O Fallon, Il*
Puszkiewicz, Briana, Chicago, Il
Pytel, Svitlana, Elmwood Park, Il
Richards, Joseph, Chicago, Il
Roth, Laura, Orland Hills, Il
Ruggs, Raven, Hillside, Il
Scott, Dawn, Springfield, Il*
Silha, Jennifer, Oak Forest, Il*
Thurston, Lataurus, Chicago, Il
Wald, Lisa, Wadsworth, Il*
Wilson, Joshua, Naperville, Il

Adams, Mark, Indianapolis, In*
Buell, Elizabeth, Angola, In
Elgin, Melissa, Salem, In*
Herritz, Lisa, New Castle, In*
Johnson, Michelle, Indianapolis, In*
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Washburn, Angela, Fishers, In
Winn, Ashley, Danville, In*
Wright, Brandi, La Porte, In*
Yorn, Jane, Oldenburg, In*

K

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Saugier, Kevin, Overland Park, Ks
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Hamlyn, Joan, Louisville, Ky*
Hamlyn, Jon, Louisville, Ky*
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Lecik, Melissa, McAndrews, Ky
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Vaughn, Lauren, Wingo, Ky*

L

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Rousselle, Shannon, Ponchatoula, La*
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Countryman, Victoria, Rosedale, Md*
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Bultemeier, Russ, Kansas City, Mo*
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Callahan, William, Springfield, Mo*
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Green, Stephanie, Vandalia, Mo*
Hines, Carol, Alba, Mo*
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Lam, Doc, Blue Springs, Mo*
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Lee, Song, St Louis, Mo*
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Points, Bridgett, Willow Springs, Mo
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Rees, Heather, West Plains, Mo*
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Shuffit Dean, Ashley, Bolivar, Mo
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Almogela, Rachel, Las Vegas, Nv
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Brown, Whitney, Las Vegas, Nv
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Hanson, Casey, Las Vegas, Nv
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Jeon, Sura, Las Vegas, Nv
Lindstrom, Bradley, North Las Vegas, Nv
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Montes, Mistie, Las Vegas, Nv
Novak, Andrew, North Las Vegas, Nv
Osmani, Abdul, Las Vegas, Nv
Ramadanovic, Brynn, Las Vegas, Nv
Rosete, Jose, Las Vegas, Nv
Sharif, Rabea, Las Vegas, Nv
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Bonner, Tracy Jo, North Lawrence, Oh*
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Coyne, Joeylynn, Philadelphia, Pa*
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S

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Day, Tamara, Lufkin, Tx*
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Dwan, Erin, Salt Lake City, Ut*
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Harding, Lindsey, Ogden, Ut
Kohutek, Keith, Salt Lake City, Ut*
Larson, Sharesa, South Ogden, Ut
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Payan, Mike, Ogden, Ut*
Phelps, D, Ogden, Ut
Randall, Emily, Ogden, Ut
Schreiber, Kendra, Riverton, Ut*
Shober, Douglas, Centerfield, Ut*
Vogelsberg, Ivy, Layton, Ut
Waite, Jenelle, Ogden, Ut

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- Registered Respiratory Therapist (RRT).
- Minimum of a BA or BS Degree; Masters preferred.
- A minimum of 4 years of experience as a Registered Respiratory Therapist.
- A minimum of 2 years of RT Instructor experience.
- Recent teaching experience highly preferred.
- Candidates must have excellent oral and written communication skills and be proficient in Microsoft Office.
- Experience teaching in an online distance education environment and familiarity with the Angel LMS platform.
- A full job description will be made available upon request.

Interested applicants should send a resume and contact information to Dr. Bob Vega at bob.vega@independence.edu with "Director of Clinical Edu" in the subject line.

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Calendar of Events

AARC & State Society Programs

August 13
Richmond, VA
Virginia Society for Respiratory Care's Capital City Symposium
Contact www.vsrc.org or capcityprogram@vsrc.org

August 18
AARC Live Webcast
Improving Control of Asthma Symptoms
Contact AARC, (972) 243-2272, www.aarc.org/education/webcast_central

August 20
Norfolk, VA
VSRC Tidewater District's Pediatric and Neonate Conference
Contact Maria.Ling@chkd.org, (757) 816-0072

September 1
AARC Live Webcast
Inpatient OSA Screening
Contact AARC, (972) 243-2272, www.aarc.org/education/webcast_central

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

September 23–24
Cheyenne, WY
Wyoming Society for Respiratory Care State Conference
Contact Brad Zwiefelhofer, (307) 638-3311

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

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

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

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

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

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

Other Meetings

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

Submissions for the next available issue are due August 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
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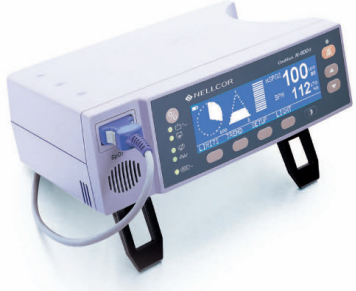

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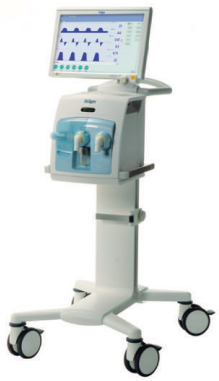

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