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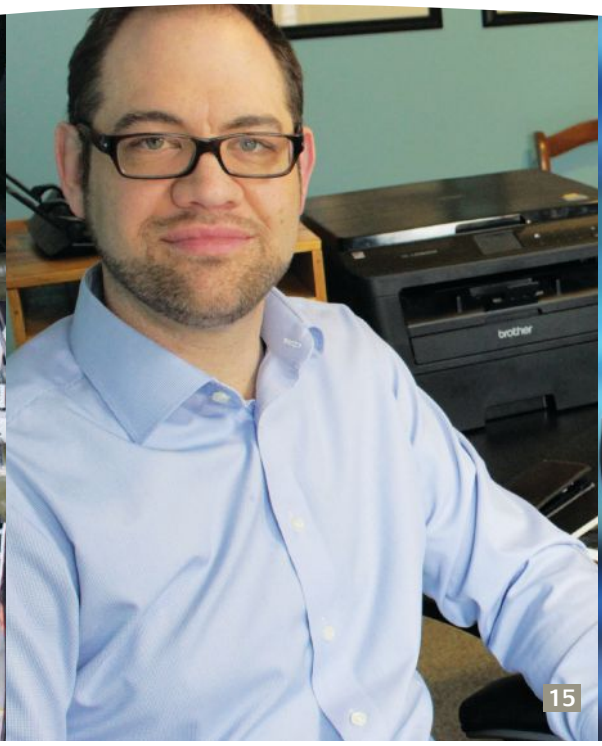

AARC Strategic Plan

The American Association for Respiratory Care has a Strategic Plan that includes its Mission and Vision Statements for 2015–2020.

Bookmark this page: http://www.aarc.org/member_services/mission/.

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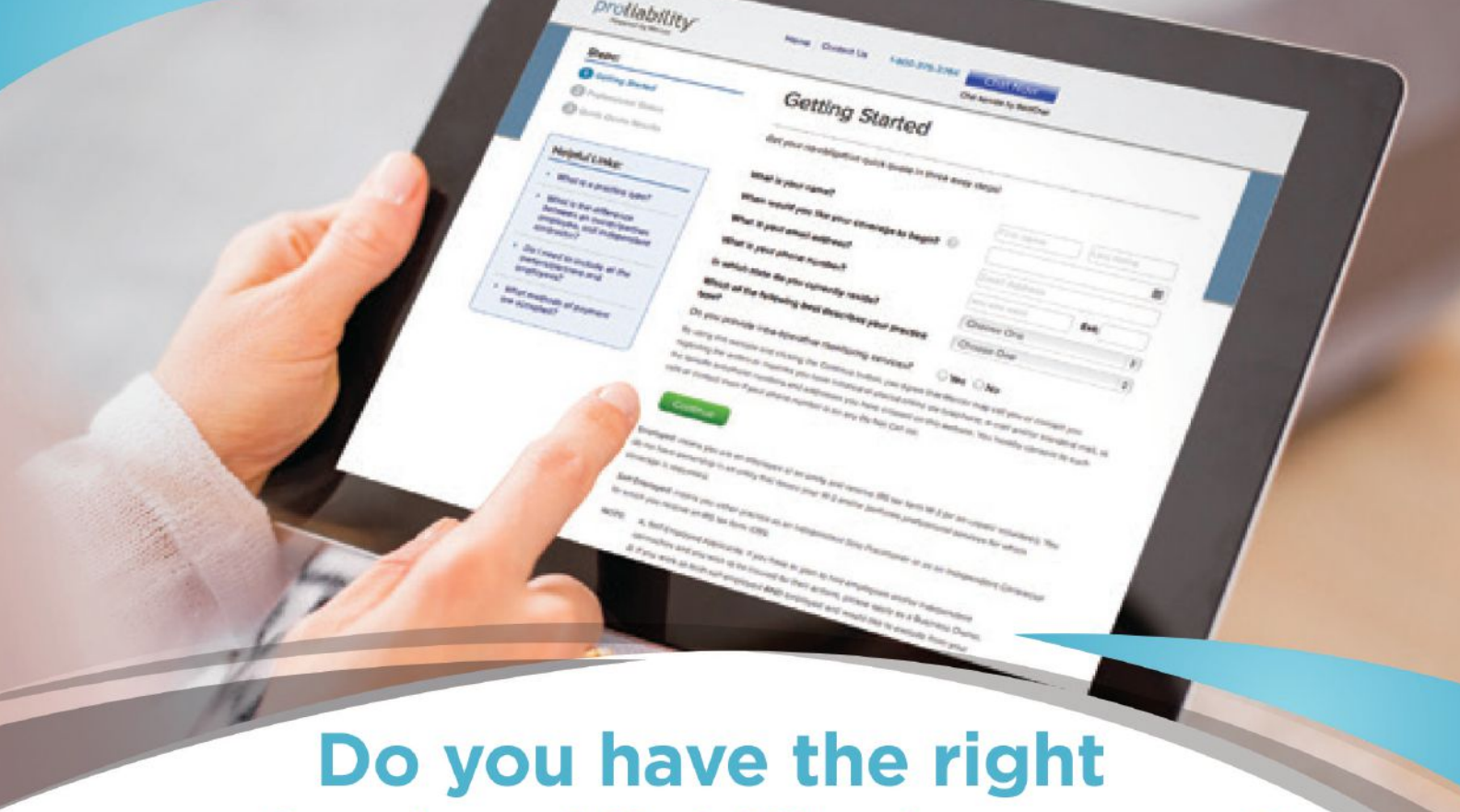

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Nothing You Can Say

by Anthony L. DeWitt, JD, RRT, FAARC

There are certain customs and courtesies that we extend to one another, and we often take them for granted. Standing to greet someone, shaking hands, and asking about family and other pleasantries are simply a measure of good manners in most parts of the country. In health care, another measure of good manners is the personal touch: holding the patient's hand, smiling, listening while they beam with pride about a visit from a favored grandchild. And while therapists are routinely busier than in years past, we still take the time, when we have the time, to make that personal connection. It's one of those things that makes the job rewarding.

I have often expressed in these pages that the best malpractice insurance you cannot buy is a good relationship with your patients and their families. This is because people generally do not sue people they like, but they have no problem suing people they do not like. None of this is rocket science — it's really common sense. Still, you'd be amazed at how uncommon common sense really is.

Another thing we frequently expect of hospitals is to have the latest in technology. The most up-to-date computed tomography system, the newest MRI scanner, and cutting-edge pulse oximetry and ventilator technology help ensure patients get the care they need. But what happens when the technology that is generally good winds up fostering a bad outcome?

Recently a patient in California was nearing the end of his life's journey because his COPD had progressed to an end stage. Like many people with limited cardiopulmonary reserve, he had reached the limit of what medical science could do for him. Toward the end of the day, the nurse came in, bringing a "robot." The robot was a simple telemedicine device that contained a television screen designed to allow distant doctors to give orders and have patient interactions without leaving their distant office.

Apparently, no one at the hospital on that night understood the importance of a personal touch. According to media reports, the robot was used to do "evening rounds." That night, however, it would wind up on the national news. The telemedicine robot displayed a physician who gave the patient the news that he was going to die, and that there wasn't anything more that could be done for him. Imagine the elderly man, deprived of a human touch as he learned by way of a television screen inside a robot that he was going to die. I consider myself fairly tech savvy, but I'm pretty sure that would not be the way I would want to learn that.

Understand that I am not suggesting there was actually something that could have been done for the man. This was not a case of malpractice. Likely there was no medical intervention that could have prevented the man's death. No, this was a case of bad manners. Something could have been done for the man's feelings and those of his wife and family. The man's wife was not in the room when this happened. His granddaughter experienced the notification and had to convey the information back to her mother and grandmother. The robotic notification of impending demise was followed in a few hours by the man's death. A bad situation had been made much worse by the ham-handed way it was handled.

One of my many jobs while in the U.S. Army was to be a casualty noncommissioned officer. A casualty NCO is responsible for getting the machinery started to ensure that when someone in the Army dies on active duty, the

about the author...

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loved ones of the soldier learn about it firsthand, from a uniformed member of the Army, and that they start getting support immediately. The bad news is delivered by an officer accompanied by a chaplain as a courtesy to the loved ones. The purpose behind the in-person notification is to start trying to mend a broken family as quickly as possible.

To the credit of the institution involved in the robot case, they apologized, promised to review their policies, and said they did not meet their own expectations for how something like this should be handled. Doubtless CNN showing up on their door to ask about it helped them identify areas of needed improvement.

When someone is going to die, or has died, there is nothing that you can say that will make it better. I recently lost a nephew under awful circumstances, and nothing I could have said to his family would have made it better. So, I focused on not making it worse.

You might think there is nothing worse than learning your husband or child has died. But there can be. Usually this happens when people are not thinking, or simply rambling to try to make themselves feel better in an awkward situation.

When dealing with family of decedents, there are a few ground rules. One of them is that it is better to listen than to talk. Let the family come to terms with the bad news on their own terms and in their own way. Let them make sense of their loss. Listen. Practice therapeutic communication (eg, "What I hear you saying is that Mr. Jones really loved the outdoors,") and understand that, in times like this, it is more important just to be there. Hold their hands. Be someone they can lean on. Offer advice if asked, but let them find their own way. Grief is a powerful force, and, when handled correctly, even anger can quickly dissipate. Handled poorly, it can blossom into a lawsuit. Many years ago, a physician told the mother of a deceased two-year-old child that he had no idea why her child had died. The mother got a copy of the autopsy report, and she knew precisely why her baby died. The lie, which was a transparent cover-up attempt, backfired badly and resulted in a policy-limits settlement. People can accept the truth, and sometimes they can even accept errors if they are disclosed. But even the best of lawyers can't defend lies and half-truths.

If in doubt about what to say, tell the family "I'm here for you, and we're going to help you get through this. Tell me how I can help you." Positive reassurance and an offer of assistance are often more appreciated than all the greeting-card sentiments you can offer. ■

Chronic Disease Manager

How Much Self Care Can Your COPD Patient Handle?

by Michael Hess, RRT, RPFT

Burnout is a hot topic in health care right now. Whether we call it by that traditional name or follow the lead of ZDoggMD, the 2018 International Respiratory Congress keynote speaker, and frame it as moral injury, we know that health care providers are increasingly stressed and pushed beyond reasonable limits. Many organizations are celebrating the launch of various "wellness" initiatives designed to improve "work-life balance," optimize productivity, and ensure everyone has a chance to recover from stressful encounters and traumatic events.

Almost everyone. One group that is often overlooked in these discussions about promoting self-care and personal wellness: our patients, particularly those living with chronic lung diseases. It's easy to forget that these folks, retired or not, are still working literally every moment of every day just to survive. They're often dealing with the stigma we still place on current and former smokers and feeling guilty that they have done this damage to themselves. They're dealing with the stress of all the logistics and planning involved in trips, from the obvious (like transporting oxygen tanks) to the subtle (like consolidating routes to make sure they simply have enough energy to get through the day). That constant stress weighs on a person, particularly when there is no true respite. It weighs on them physiologically; a recent study found that, based on biomarkers including hormone levels and telomere length, people with COPD were physically a decade or more "older" than their chronological peers.[1] It weighs on them psychologically; reports of anxiety and depression run nearly double in the COPD population compared with their healthy cohorts, and the risk increases with symptom severity.[2] And it weighs on them socially, as isolation and loneliness are common in the COPD community.[3]

Unfortunately, these concerns often go unaddressed. Much of our system's focus has historically been on physical health rather than on mental well-being (otherwise, we probably wouldn't be talking about moral injury). This is certainly true in the world of COPD, where the Hospital Readmission Reduction Program (HRRP) has been driving care "improvements" over the past few years. Unfortunately, many interventions developed in response to HRRP have failed to demonstrate any therapeutic value, or any ability to actually reduce unavoidable readmissions.[1] One consistent exception has been the implementation of patient-centered disease management education programs that go beyond the basics of providing inhalers and scheduling follow-up visits.[2] We must realize that people cannot use any of these tools or services properly if we don't help them understand *how* or *why* to use the tool. Without focusing on the development of skills and coping mechanisms to increase their own self-efficacy, any quality improvement initiative is destined to fail.

Self-efficacy has arguably been considered more the realm of the social worker or counselor than the traditional respiratory care professional. However, this is a critical concept to understand as we develop into newer roles in care coordination and chronic disease management. Albert Bandura, the godfather of self-efficacy theory, defines the concept as an individual's subjective assess-

about the author...

Michael Hess, RRT, RPFT, is the chronic lung disease coordinator at Western Michigan University Homer Stryker M.D. School of Medicine. He serves as a board member of the US COPD Coalition and is president of the Michigan Society for Respiratory Care.

ment of how well they can perform a particular function.[4] Think back to the first time you suctioned someone on a ventilator. It was probably at least a bit of a nerve-wracking experience, especially when they started coughing! The more you understood the process, and the more experience you had doing it, the less scary it became, and the more comfortable you became. You increased your self-efficacy. From the patient perspective, disease management regimens are just as complicated and intimidating as the complex procedures we consider routine; worse, most folks don't have the benefit of years of education or lab practice before they start. With so many devices, schedules, and symptom-recognition triggers, it's no wonder people get fearful and just give up.

That's where we come in. In the wards and units, in the emergency department, in the testing lab, or wherever we touch our patients, RTs have multiple opportunities to evaluate our patients' physical and cognitive abilities, identify barriers and deficits, and provide retraining to overcome those knowledge gaps. Addressing these issues increases patients' confidence, which in turn improves their self-efficacy and likelihood of adherence, which has a direct impact on health care utilization and quality of life.[5] This means RTs must become familiar with the myriad tools available to them, not just to evaluate physical and mechanical factors of medication use, but also to take the time to evaluate cognitive factors as well. For example, the simple "teach back" method has been invaluable in my practice to determine a person's actual lived routine. It's very easy for a patient to simply say, "Yes," when someone asks if she taking her inhalers according to the protocol; everyone wants to be the A+ patient and not get scolded. But if you ask someone to tell you what they do every day, you find out exactly what they do; how many puffs out of which inhaler and how often. This helps identify confusion and enables quality improvement through the use of paper or electronic reminders, changing the regimen to a less confusing plan, or simply reteaching based on their general and health literacy levels. We can use tools like the St. George's Respiratory Questionnaire, (SGRQ), COPD Assessment Test (CAT), and Clinical COPD Questionnaire (CCQ) to look beyond the numbers on the blood gas or spirometer and see how someone really *feels*, and use that information to enhance their self-efficacy over the long term, instead of just buffing out their symptoms until they bounce back to us.

The last few GOLD reports reinforce the need for and impact of programs that enhance self-efficacy to improve adherence and disease management. These approaches require not only the technical knowledge to identify and describe the best scientific regimen, but also the softer skills to reach people where they live, to identify barriers to optimal treatment, and to develop a plan that works best for the individual. While that may sound like a broad mandate, that's precisely what our colleagues in pulmonary rehab do, day in and day out, and they model many of the theories we will need to adopt for success in the disease-management space. For example, when we talk about goal-setting, is it more accessible to tell someone that we'll improve their FEV_1 by 10%, or that they might be able to check the mail without getting short of breath? Do you believe it matters more to tell them that we will enhance mucociliary clearance, or that they might be able to sit through Sunday services without coughing as much or as loudly? These may seem like differences without distinctions, but to someone lacking our clinical background, setting achievable goals in easy-to-understand language in alignment with their own values may mean the difference between going on and giving up.

These principles are not unique to COPD, either. People with cystic fibrosis, pulmonary fibrosis, asthma, they ALL face barriers to adherence and effective symptom management. Take a few minutes to get to know what those barriers are, and use the combination of scientific evidence and creativity that RTs are known for. If we want our patients to understand us, we must understand them first. ■

References

1. Karametos I, Tsiboli P, Togousidis I, Hatzoglou C, Giamouzis G, Gourgoulianis K. Chronic obstructive pulmonary disease as a main factor of premature aging. Int J Environ Res Public Health 2019;16(4):540.
2. Yohannes AM, Alexopoulos GS. Depression and anxiety in patients with COPD. Eur Respir Rev 2014;23(133):345-349.
3. Wong SS, Abdullah N, Abdullah A, et al. Unmet needs of patients with chronic obstructive pulmonary disease (COPD): a qualitative study on patients and doctors. BMC Fam Pract 2014;15(1):67.
4. Bandura A. Self-efficacy mechanism in human agency. Am Psychol 1982;37(2):122-147.
5. Zwerink M, Brusse-Keizer M, van der Valk PDLPM, et al. Self-management for patients with chronic obstructive pulmonary disease. Cochrane Database Syst Rev 2014;3:CD002990.

AARC Horizon Goal 2: Communication/Marketing

by Karen Schell, DHSc, RRT, RRT-NPS, RRT-SDS, RPFT, RPSGT, AE-C, CTTS

This month, in accordance with our Horizon Goal 2: Communication/Marketing: "AARC consistently delivers the right message, to the right audience, at the right time, through the right channel," we are reporting recent events of our Association. The AARC is working on being more current with our messaging and transparent to our members/stakeholders. As such, we are improving our processes and the communication of the work and accomplishments of the AARC Board of Directors (BOD), announcing them to membership after each scheduled board meeting throughout the year.

We had our first BOD meeting in March, during which we developed what we call the "Big List" of work completed as well as work in progress. The list was distributed to the AARC House of Delegates (HOD) members and state society presidents, committee chairs, and section chairs early in April for discussion during each state society board meeting, committee meeting, and section meeting. You should be hearing from your respective state society leaders soon, and if not, we encourage you to hold them accountable for this information. We welcome your questions, concerns, and input as we work on the challenges facing our profession.

Additionally, the AARC shared a webcast with HOD members and state society presidents prior to our BOD meeting in March so that they could share this information and request input for discussion at the meeting. The BOD will next meet in July and, once again, we welcome your questions and concerns for consideration at the meeting. We will hold a webcast for HOD members and state society presidents in October prior to the November BOD meeting to be held at our International Congress.

The BOD and Executive Office are developing a plan for posting our Big List through various methods on the AARC web page and its social media. We plan to have a place for you to go to see the list and to ask questions, so please watch for these messages as we develop the plan.

The AARC is improving our messaging to our stakeholders as well. We want to clearly inform them of our work in process and seek opportunities to collaborate on issues and challenges that affect AARC members and patients.

Spring BOD meeting, Horizon Goals, and the Big List

The remainder of this column is a summary of key information from the recent AARC BOD meeting. Each agenda item is aligned with an AARC Horizon Goal. By the way, creation of the Big List is in alignment with Horizon Goal 2.

about the author...

Karen Schell, DHSc, RRT, RRT-NPS, RRT-SDS, RPFT, RPSGT, AE-C, CTTS, is the 2019–2020 AARC President.

Refresher on the AARC Horizon Goals

Goal 1: Advocacy: Respiratory care provided by respiratory therapists is recognized and supported in all health care settings.

Goal 2: Communication/Marketing: The AARC consistently delivers the right message to the right audience at the right time through the right channel.

Goal 3: Education/Professional Development: The AARC offers engaging, valuable professional education that advances the

professional practice of respiratory therapy and supports advancement of the profession.

Goal 4: Events/Meetings: The AARC is recognized as the #1 provider of engaging, high-quality, world-class educational and research conferences that attract respiratory therapists and inter-professional audiences.

Goal 5: The AARC has an engaged, diverse membership comprised of the majority of practicing respiratory therapists.

Goal 6: Revenue/Finance: The AARC produces ample revenues from diverse sources, which are managed to the highest standards.

The President's report on Horizon Goals 1, 2, and 5

The AARC has begun collaborating with several new organizations this year.

The National Association of Allied Health Professions (NAAHP) works to advise students about careers in the health field. AARC Director at Large Tim OptHolt, EdD, RRT, FAARC, is serving as the AARC liaison to this organization. With this collaboration, the AARC is working to increase awareness about the RT profession within the NAAHP. The goal is to support more students entering the respiratory care profession.

The AARC is now a member of the **Interprofessional Education Collaborative (IPEC).** The IPEC, working in collaboration with academic institutions, will promote, encourage, and support efforts to prepare future health professionals so that they enter the workforce ready for interprofessional collaborative practice that helps ensure the health of individuals and populations.

AARC Executive Office staff members have begun meeting with respiratory therapists in the Veterans Administration **(VA)** to strengthen our relationship with this large group of professionals.

The AARC has begun meeting with the **Canadian Society of Respiratory Therapists (CSRT)** to establish communication and investigate opportunities for collaboration.

The **AARC Oxygen Safety on Airlines Ad Hoc Committee** has been formed, and AARC Vice President Sheri Tooley, BSRT, RRT-NPS, FAARC, is serving as its chair. Committee charges are to develop strategies and tactics aligning with the AARC's 2019 Horizon Goals to address the concerns of both the public at large and the respiratory therapy community as they relate to patient airline travel with oxygen within the United States.

We will evaluate current rules and regulations, education, and airline staff understanding of oxygen and oxygen equipment. We will also develop educational materials to distribute to the airlines and to airline personnel to enhance their understanding of portable oxygen concentrators and emergency oxygen. In addition, we will lobby for less restrictive travel with oxygen.

Financial review and updates (Horizon Goal 6)

At the recent BOD meeting, the Association's investment representative reviewed the 2018 AARC investment data, including the impact of market volatility throughout the year, and reported that we are doing well overall. The AARC remains committed to *not* investing in companies or funds that do business with companies that sell or profit from tobacco or vaping.

The AARC's auditing company provided the BOD with a CPA review, or auditors report. At the close of each fiscal year, the AARC employs an external auditor to review all financial data for the organization. The auditors found the AARC finances to be in good order and in compliance with generally accepted accounting principles and made no recommendations at this time. Additionally, Teri Miller, MEd, RRT, CPFT, HOD speaker, has been working with our auditor to determine methods of ensuring the fiscal soundness of the AARC state societies. More details will follow from the HOD leadership.

Advocacy report and updates (Horizon Goal 1)

AARC Associate Executive Director of Government Affairs Anne Marie Hummel reported that the Better Respiration Through Expanded Access to Telehealth (BREATHE) Act will soon be introduced as a Congressional bill. Forty-five state societies supported Hill Day, with 135 RTs participating in more than 326 scheduled meetings with their representatives in Congress.

Regarding access to liquid oxygen, the AARC is part of a small coalition with other organizations to work together on improving and ensuring patients' consistent access to liquid oxygen. Specifically, we would like to direct CMS, which handles Medicare, to monitor access to liquid oxygen while competitive bidding is suspended.

PACT supporters also asked Congressional leaders to oppose the addition of mechanical ventilators to the competitive bidding program.

We have also learned that tighter regulations on tobacco are coming, including more secure access for vape products.

AARC Board of Medical Advisors update (Horizon Goals 1 and 3)

Neil MacIntyre, MD, provided the Board of Medical Advisors (BOMA) report to the BOD and shared with everyone that BOMA remains focused on collaborating with other physician organizations.

Executive Office report (Horizon Goals 1, 2, 3, and 5)

AARC Executive Office leadership reported that the AARC hosted this year's Leadership Bootcamp on March 22–23, with 47 attendees from 32 state societies. Topics included board responsibilities, financial stability, and engagement strategies.

In other AARC Office news, the American College of Chest Physicians (CHEST) has agreed to include a respiratory care-focused presentation at its 2019 CHEST conference. The AARC will have a booth at both the CHEST and the American Thoracic Society (ATS) conferences this year. In addition, the AARC is participating in the 2019 Health Occupations Students of America (HOSA) Conference.

It was also noted that the Association raised $17,000 in 2018 for its Disaster Relief Fund (a total of $176,000 is currently in the fund). We have experienced several federal disasters recently and more funds will be needed to rebuild.

AARC is working with the Allergy/Asthma Coalition to promote allergy friendliness on airplanes (eg, nut allergies, animal allergies that affect patients).

The transition checklist for the Associate-Bachelor Program is currently available on the AARC website. The Issue Paper: Entry to Respiratory Therapy Practice 2025 (Horizon Goal 3) was placed on the AARC website (and the comment period has ended). A total of 109 comments were received; 60.4% were pro bachelor's degree and 39.6% either neutral or against. The BOD has referred the document back to the respective committee for changes to be made based on recommendations from the comment period and discussion.

Program Committee update (Horizon Goals 3 and 4)

The AARC Program Committee met in January to review the estimated 700 submitted proposals for the Association's 2019 Summer Forum and AARC International Congress. The upcoming dates/locations for the AARC Summer Forum are:

- 2019 — July 20–22 (Sat–Mon), Ft. Lauderdale, FL
- 2020 — Pending
- 2021 — July 12–14 (Mon–Wed), Bonita Springs, FL
- 2022 — Palm Springs, CA, dates pending

The upcoming dates/locations for the AARC International Congress are:

- 2019 — Nov. 9–12 (Sat–Tue), New Orleans, LA
- 2020 — Nov. 14–17 (Sat–Tue), Orlando, FL
- 2021 — Nov. 6–9 (Sat–Tue), Phoenix, AZ

AARC Strategic Plan and Horizon Goals (Horizon Goal 2)

The AARC Strategic Plan has been posted our website. Members may contact the AARC office for more details.

HOSA update (Horizon Goals 1 and 3)

We are requesting the AARC state societies to reach out to their local Health Occupations Students of America (HOSA) chapters for recruitment of high school students to the respiratory therapy profession. We plan to build a toolkit to use for consistency in messaging.

Award nominees

The AARC BOD has voted on nominees for the Hudson, Petty, Life, Honorary, RT Legends, Mitchell Baran, Forrest Bird, and Mike West Awards. These recommendations and nominations will be submitted to the AARC Presidents' Council and the American Respiratory Care Foundation. Selected recipients will be announced later this year at AARC Congress 2019 in New Orleans, LA.

Virtual Museum request

COPD-related materials are wanted! Do you have any pictures of equipment, documents, notes, anything dealing with the history of COPD management? If so, please share with the Virtual Museum by contacting Asha Desai at desai@aarc.org.

AARC Bylaws Committee

The Bylaws Committee reviewed the bylaws for the following states and found they were not in conflict with the AARC Bylaws: Maine, Vermont/New Hampshire, Kentucky, and Missouri.

A busy year for the Association

As you can see, the AARC and related organizations are working hard for you this year. We will keep you posted with updates on the AARC website as we make progress on the Horizon Goals and improve opportunities for respiratory therapists and patients. ■

No Limits to What an RT Can Do

by Debbie Bunch

The respiratory care profession is made up of a diverse group of people who specialize in a wide range of areas involving the care and treatment of people with cardiopulmonary conditions. *AARC Times* has delved into nearly all of those specialty areas over the past 41+ years in print. Indeed, our very first issue was devoted to specialization, and since then we've taken a closer look at RTs who have done everything from inventing new pieces of equipment to researching innovative concepts, to joining neuromuscular disease teams. It goes to show just how many opportunities there really are for anyone who enters the respiratory care profession.

Along the way, though, we've come across a few therapists who have taken the concept of diversity to the next level. These therapists didn't just break new ground, they shattered ceilings to do the kind of work that few other therapists would ever even think was possible.

It was all happening at the zoo

The first such article came during our very first year of publication, when the December edition featured a story about an AARC member and her role as respiratory therapist to animals large and small. The title was "Lions, Tigers, and Bears, Oh Yes" and it certainly fit. Keith Finlayson, RRT, was director of the respiratory therapy program at Broward Community College in Fort Lauderdale, FL, as well as a part-time RT at the Crandon Park Zoo. The first thing she said to us when we called to interview her? "You're going to have to give me about five seconds. I've got a monkey on my back."

Finlayson went on to describe the role she played at the zoo, which came about while she was serving as a volunteer and saw a buffalo that was suffering from pulmonary edema. She went on to help the zoo acquire a mechanical ventilator and other respiratory equipment that could benefit animals such as that one, then she ended up coming on board herself to oversee the newly created respiratory program.

Her biggest moment came when she became the first person to ever apply mechanical ventilation to an elephant undergoing surgery. It was a very big deal, not just for Finlayson, but for her entire community, where it became the talk of the town and was covered on all three major television networks. Said Finlayson, "I was a little nervous at first — especially with all those cameras pointed at us — but after I did it for a few seconds, I knew that I was home free."

Breathing new life into lung transplantation

Another story that illustrated just how far an RT could take her passion for the profession came in 2013, when we featured an AARC member who almost singlehandedly discovered a way to preserve more lungs for transplant. "Sharon McRee's A-Ha Moment" appeared in our August issue that year and chronicled the journey she took from having an idea — namely that placing potential donors on the aggressive ventilator settings used in the hospital's evidence-based trauma ventilator management protocol could keep their lungs viable — to learning her protocol would receive a national award.

"In 2007, we had an organ donor who, per the trauma MD, had lungs that were pristine but the paO_2 was dropping," recalled the Asheville, NC, therapist. "The LifeShare coordinator asked me if I could fix it." She decided to try applying the trauma ventilator management protocol, and amazingly, the paO_2 came back up and they were able to procure the lungs. It worked on several additional donors as well, and she eventually enlisted the help of a trauma surgeon on staff to develop the formal protocol, which called for the respiratory therapist to place the donor on the ventilator parameters he or she would typically use for a critically ill trauma patient.

McRee presented her outcomes at the AARC Open Forum in 2008, showing that the number of donor lungs capable of being procured at her hospital went up after the protocol went into place. Her local procurement agency, LifeShare of the Carolinas, implemented the protocol in its 40 member hospitals as well. Prior to the protocol, only 4% of donor lungs were procured at those facilities. After the protocol, that percentage shot up to 29–32%.

The North American Transplant Coordinators Organization, along with the Association of Organ Procurement Organizations, awarded LifeShare its Quality Award for its lung donor ventilator management protocol in 2008, and McRee was invited both to present

at the conference and to accept the award on behalf of the organization. She was honored — and inspired to do even more. "Now that I know we can make a difference, I feel a responsibility and obligation to these families to make sure the organs they so unselfishly donated save the lives of as many people as possible," she said.

The final frontier

The most "out of this world" story we ever published about an AARC member who broke out of traditional boundaries, though, appeared in our November 2001 issue. Look back at the cover of that issue and it's easy to see what what we mean. There was George Beck, BA, RRT, floating in the weightless environment of NASA's "vomit comet" — the airplane used by the space agency to get astronauts ready for space travel. We called it "A Space Odyssey: One RT's Journey into Medical Technology for Space."

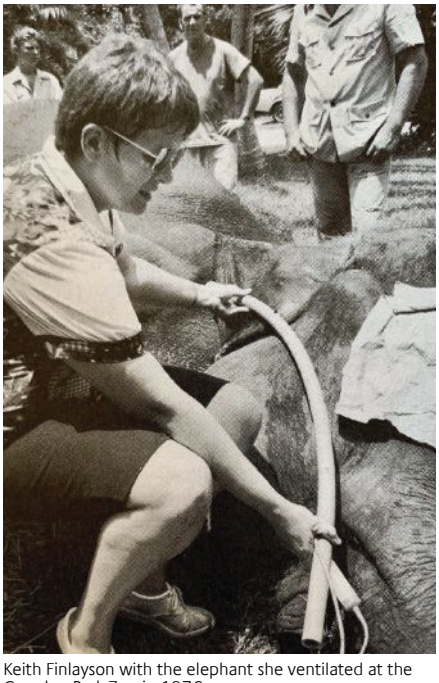
As the operational medicine project lead for the Advanced Projects team at Wyle Laboratories, a contractor working at the Johnson Space Center in Houston, TX, Beck was responsible for enhancing the medical care capability for the space station and space shuttle. He came to the position from the University of Pennsylvania, where he was doing research in hyperbaric physiology and studying mechanical engineering. "Wyle became familiar with my work and offered me a position with the Advanced Projects Section," he said.

He and his team regularly tested the respiratory equipment they were working on in the KC-135 aircraft — dubbed the "vomit comet" because, well, it tended to illicit that response from those who traveled inside it. The four-engine turbo jet would fly out over the Gulf of Mexico in a series of parabolic curves that simulated the effects of zero gravity and made stomachs turn. At the time of our story, Beck had been on numerous flights, testing a wide range of equipment and procedures — including intubation. "The human body undergoes a number of changes as it adapts to microgravity, including changes in the cardiovascular system, neurological system, and musculoskeletal system," Beck explained. "We are just beginning to address how our clinical responses might require modification from the terrestrial standards as a result of these changes."

The devices in question were being constructed to take advantage of what was then a fledgling new technology dubbed "smart," and Beck saw great potential to translate the findings into medical care on Earth. As he mused at the time, "For the therapist covering the unit and the emergency room, a smart ventilator system would page him if there were a problem with the ventilator and allow him to take corrective action from the remote location or guide the nurse in the unit."

RTs never cease to amaze

The *AARC Times* staff has always thought of RTs as amazing people — and clearly covering stories such as the ones about Finlayson, McRee, and Beck is a big part of the reason why. These therapists and many others have taught us that there really are no limits to what RTs can do! ■



Keith Finlayson with the elephant she ventilated at the Crandon Park Zoo in 1976.

Sharon McRee was credited with significantly increasing the number of donor lungs available for transplant.

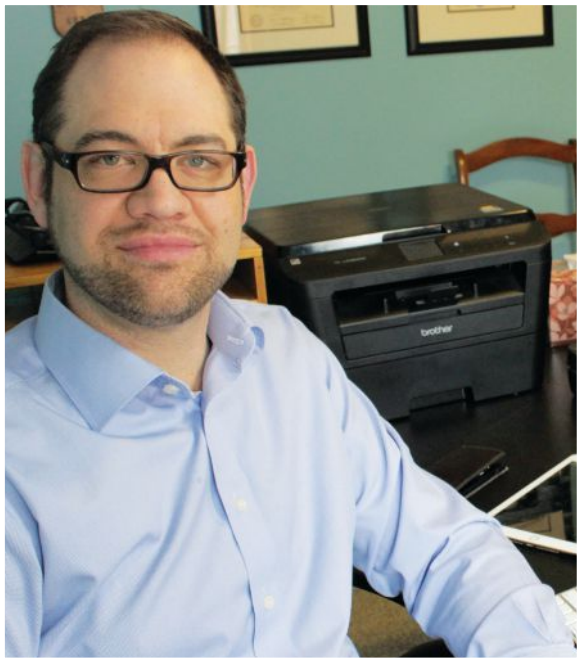
A little weightlessness didn't keep George Beck from conducting studies on medical care during space travel.

Minnesota RTs Break New Ground in Telemedicine

by Debbie Bunch

Rural hospitals are benefiting from the telehealth services of respiratory therapists

Rural hospitals play an integral role in the nation's health care system, but keeping their doors open is becoming increasingly difficult. According to a recent report from Navigant Consulting that examined the financial viability of more than 2,000 rural hospitals nationwide, one in five is in danger of closing due to financial constraints.[1] The report suggests that greater use of telehealth could be an answer. The American Hospital Association agrees, and, as part of a larger report on rural hospitals issued earlier this year, they called for expanded access to telehealth, noting that "telehealth expands access to services which may not otherwise be sustained locally due to provider recruitment/retention difficulties, low patient volume, or inadequate local resources."[2]



Bryan Wattier demonstrates the technology used by rtNOW to conduct the telehealth sessions, with Curt Merriam, RRT, chief sales officer for the firm, on the screen.

A new telehealth initiative being spearheaded by AARC members from Minnesota is addressing all of those needs and more. Called "rtNOW," the service provides respiratory therapists via telehealth to rural hospitals in Minnesota and the upper Midwest region that either don't have an RT on staff or can't staff an RT on a 24/7 basis.

An unfilled need

"The idea for rtNOW was born out of accidentally finding a problem, seeing an unfilled need, and then working to find a solution," says Bryan Wattier, MEd, RRT, who serves as chief of operations and self-proclaimed "operations ringleader" for the firm, which grew out of C.O.R.E. Respiratory Services, a traditional RT staffing agency headquartered in the Minneapolis metro area. "Primarily we wanted to assist our staffing clients, and through working out a solution discovered that we had a viable service to offer," explains Wattier.

You've heard of telehealth. Now meet telerespiratory.

It all started when critical access hospitals began requesting an RT be sent out to their facilities on short notice to provide a respiratory consultation on a patient. In some cases, the hospital was 45 minutes away, and often the consult didn't take more than 20 or 30 minutes. So the RT was spending nearly two hours on the road for about half an hour of patient care.

Around the same time, C.O.R.E. Respiratory staff began noticing a curious practice in some of these facilities. Namely, nurses could be seen using FaceTime to call up RTs they knew who previously worked at the hospital to ask questions about certain patients. Wattier and his colleagues realized that without the guidance of a licensed RT, the application of some respiratory modalities could be posing liability concerns for the hospital. In addition, the use of FaceTime without a business agreement violates HIPAA regulations for use in patient care.

They also gained a greater awareness of how often respiratory patients were being transferred to other facilities because the staff on hand didn't have the same comfort level as an RT in dealing with pulmonary conditions. "This proved to be costly to the critical access hospital due to lost revenue, and an inconvenience to the family of the patient, who would need to travel many miles to visit their loved one," says Wattier.

Plenty of demand

The team began talking to administrators and nurses in rural hospitals that did not have RTs on staff to better understand their needs, and they found that most of those needs could be addressed via a telehealth approach. Of course, coming up with the idea and putting it into operation were two different things. "Three years ago, telehealth was in its infancy," says Wattier. "People sort of knew about it, but it was still such a new concept. So, truth be told, we had to estimate the need based on our clinical experience, our observations of the market we were in, how we believed we could impact patient care, and the bottom line of health care organizations."

They continued to meet with rural hospital administrators and nurses to explain the telehealth concept and acquire buy-in for the service. They found plenty of demand because many hospitals either didn't have RTs on staff at all, had had RTs at one time but didn't anymore, or only had an RT on the day shift.

"Either facilities could attract, retain, and keep a therapist employed with enough work, or they simply didn't have a program developed to support their employment, and the nursing staff would deal with the rudimentary respiratory therapies, buried in large order-sets," notes Wattier. The team quickly realized that they could help improve care by offering to review policies and procedures and then recommend or update policies to incorporate the latest evidence-based practices. Wattier says most clients have taken them up on that offer.

They call the whole bundle "telerespiratory," and to their knowledge they are the first firm in the nation — possibly even the world — to be doing it. "With the virtual presence of an RT, a patient is able to be treated faster, receive the proper treatment, and the RT can be included as part of the team making the decision for the patient to stay or to transfer out of that hospital," he says.

All about the staff

Wattier emphasizes the most important piece of the rtNOW pie is the professional RTs who make up the staff of telerespiratory therapists. Therapists hired for the position must have at least five years of experience in a hospital (right now the average years of experience for the team is around 13), and they all work as RTs in hospitals in the Minneapolis-St. Paul metro area. This ensures they are staying current on the latest treatments and techniques. They work out of home offices during their telehealth shifts, which are available in blocks of 2–16 hours, allowing them a great deal of flexibility when it comes to staffing. Typically, telehealth calls last about 20 minutes, with more calls coming in during the overnight hours than during the day.

On the technology side, the company uses the Apple® platform for its hardware and has developed proprietary software to run scheduling, call routing, call tracking, and communications. Hospitals can sign up for 24/7 coverage or

just nighttime coverage, if they have an RT on days. Wattier says the avoidance of three patient transfers is enough for a facility to recoup the cost of the service for one year.

He emphasizes that RTs who come to work for the telehealth initiative see it as a way to keep the profession viable in areas where it might not normally have a presence, and the hospitals benefit from the fact that the RT coverage really is 24/7, with no exceptions. "They don't need to worry about weather, sick days, or time of day," says Wattier. "rtNOW staff are always available through our business model so that our client's staff have access to the support and expertise of a respiratory therapist."

Training for the position consists of one-to-one explanations and demonstrations on how the technology works, and RTs are also schooled in the use of theater techniques such as proper camera position, lighting, and even which colors of clothing look best on the screen. "Verbal communication and observation are extremely important to be able to talk through issues and understand the problems we get calls about," he says. Twenty RTs are currently serving in the telehealth role.

Challenges and rewards

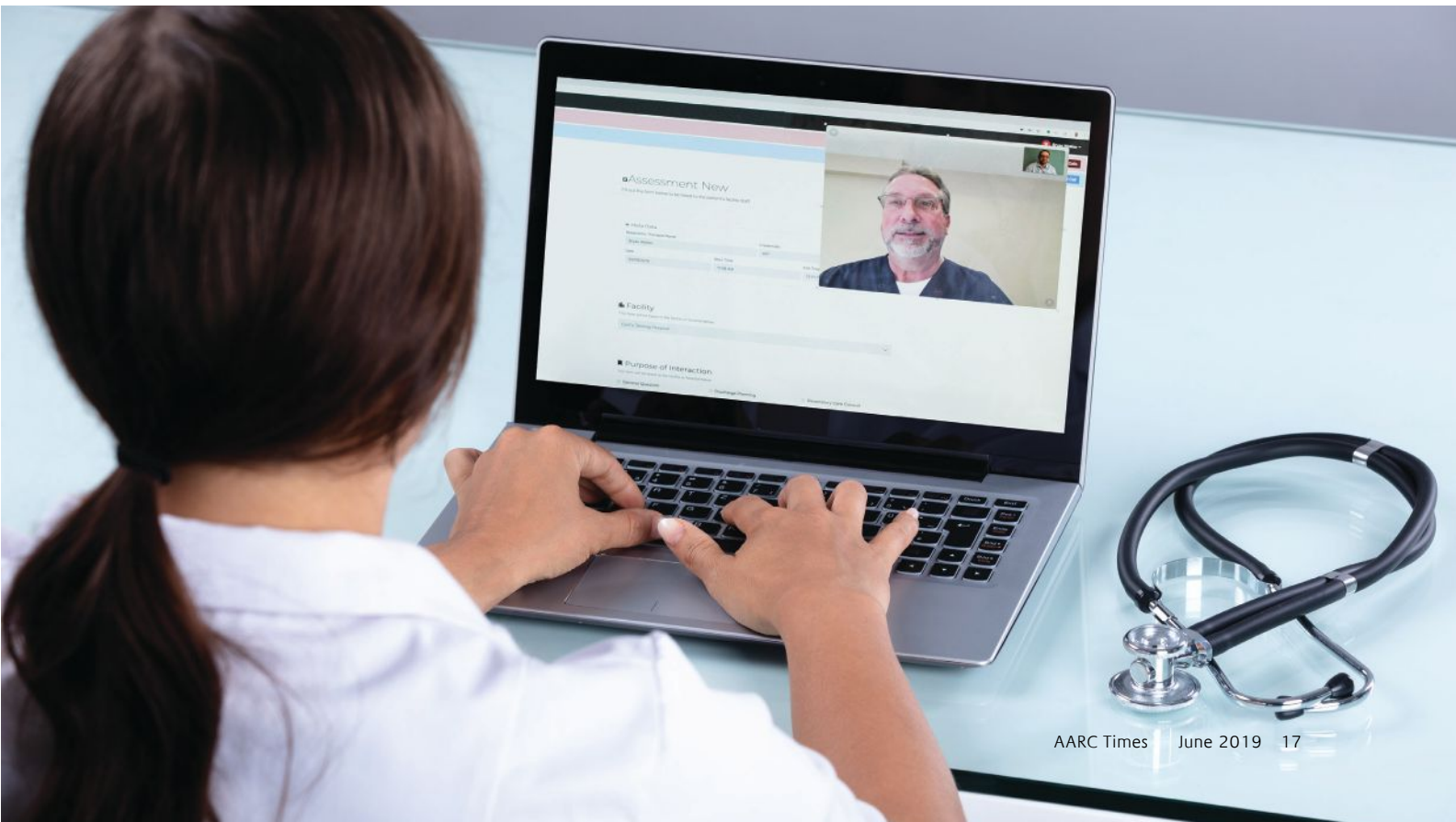
Molly Quinn Jensen, RRT, and Janet Robinson, RRT, both work for the company. While they say it can be a challenge to deliver care via telehealth, they find it extremely rewarding as well.

"Most of our assessment is based on the visual inspection of the patient," explains Jensen. "This leads to many clarifying questions about what I see on the video." She notes reported breath sounds and breathing mechanics need to be correlated with lab values and monitored values, and that can be difficult if the patient is using a BiPAP or nebulizer. It can also be hard to assess improvement because she isn't physically in the room, and situations can get stressful if the hospital suddenly has a surge in patients and staff become overwhelmed.

That said, she says being able to provide her expertise to nurses at the bedside is worth all the effort. "It's amazing to be there as a resource for the staff onsite," she says. "Being able to provide a second opinion, a confirming opinion, education to patients about their pulmonary disease, or just an ear to listen is soul fulfilling."

Robinson says there is definitely a learning curve that must be overcome by RTs delivering telehealth services for the first time. "It was intimidating in the beginning as I have always been a hands-on, task-oriented caregiver," she says, emphasizing it was hard "not being able to touch, quickly glance at the monitor, and just 'know' as soon as you walk in a patient room how that patient is doing."

The rtNOW team has been able to help Robinson and her fellow telehealth RTs overcome many of those issues. "It's very exciting to be involved in the beginning of this new arena of health care. A lot of small community facilities



don't have a respiratory therapist on staff and to be able to help them give patient care via video chat will only improve patient care and outcomes," she says. "I'm proud to be a part of this."

Common questions

The nurses these RTs work with most often just want to know they are on the right path with the care they are delivering to the patient. Robinson says she will discuss vital signs, treatments given, and current respiratory symptoms to ensure that's the case, and she also covers things to look out for going forward if the current treatment should fail to work for the patient.

Jensen says the most common questions she gets relate to ventilator interventions for abnormal arterial blood gas values, but the telehealth sessions she has with nurses can run the gamut from COPD education, to goals for tidal and minute volumes, to when to recheck blood gases and the changes to be made based on the results. "I always try to give the staff the next step for the scenario — good or bad," she says. "That way, if it works out, they have the information to keep going. And if not, they know when to call back." She also spends a fair amount of time interacting with the patient, providing information and advice based on established guidelines on dealing with the respiratory condition at hand.

Lynnae Pelzel, RN, works at the 16-bed Sleepy Eye Medical Center in Sleepy Eye, MN, and regularly uses the service. She believes it would be beneficial to any institution that doesn't staff RTs on a 24/7 basis, noting that the telehealth equipment is easy to use and that having access to a qualified RT any time she needs one makes her job easier and improves the care she can deliver to her patients. "They can troubleshoot for you, or they can help you out with a COPD exacerbation or whatever the emergency is, or even a non-emergency," she says. They don't have many resources, and going to someone who specializes in that area gives comfort to the nurses while meeting the needs of their patients.

Katie Bloedow, RN, who serves as education coordinator at Sleepy Eye Medical Center, says the RTs they telecommunicate with know everything about the equipment being used in her facility — even if they've never stepped foot in the building. Having that extra set of eyes to help her assess the patient's breathing and determine the right course of action is invaluable to her and even to some of the physicians on staff. It also helps to keep her patients in her facility. "I'll have a patient who maybe isn't doing so well, and then I've used rtNOW and their recommendations, and I've seen my patient turn a corner for the positive," Bloedow says. Also, having the rtNOW consult allows her facility to provide that service in-house and avoid a patient transfer to another facility to receive the needed care.

High-touch too

The telehealth RTs aren't available only to provide guidance on the high-tech aspects of care. A patient who had been admitted to one rural hospital with a COPD exacerbation and was treated via telehealth by Molly Quinn Jensen shows how the services of a telehealth RT can be high-touch as well. "He wasn't in critical condition but he was significantly deconditioned and landed in the hospital for severe dyspnea," she recalls. "I gathered some critical information from the chart prior to speaking with him on video conference." The man was only 58–60 years old, but he had the kind of advanced emphysema Jensen says would make any RT look at the CT scan and think, "Oh geez, this isn't good." But he had recently quit smoking, so he was obviously trying to make things better.

"When I first saw him on video, he had rather significant accessory muscle use, was barrel chested, and appeared to be significantly dyspneic," Jensen explains. "Suffering from orthopnea as well, he hadn't slept in a few nights and was generally exhausted but said he was 'doing alright.'" She challenged that statement with a smile and then congratulated him for quitting smoking and told him how proud she was of him that he had been able to do that. He just stared back and then said he didn't think it mattered. His cough had worsened and he wasn't really feeling well at all.

Jensen spent several minutes talking with him about what happens after smoking cessation and she acknowledged how hard it is for people to keep on track. She gave him space to reflect on the choices he had made in his life that got him to this point and his regrets for them before telling him to let all that go — what mattered now was what he would do going forward.

"Now, every RT who looked at this patient and his CT would know there isn't much time left, and quality of life may be minimal," Jensen says. "What is important is that, from 200 miles away, we have the opportunity to tell someone the truth, the good and the bad, and that we can empower the patient to make choices, be educated, and move forward with the information they need to live the highest quality of life they can for the time they have left. I don't know how he did in the long run, but he was grateful to be supported positively and not to dwell on the previous life choices. I will never forget the positive outlook he shared."

The missing piece

Bryan Wattier says the telerespiratory services offered by rtNOW provide the missing piece to the care team in the small facilities that have taken advantage of it. "Many rural hospitals have physicians and other staff that received training in larger institutions and are used to the services of a respiratory therapist," he notes. "When they begin working

in the rural setting, they are expected to know more and do more with fewer resources."

The telehealth RTs fill the gap. Since they have remote access to the patient's electronic medical record, they are often able to review the case and communicate pertinent data to the hospital staff before they have even had a chance to see the patient for themselves. In all cases, the RTs follow an RCAT — respiratory care assess and treat — protocol provided by the client hospital so that the hospitals are ensured that the telerespiratory therapists are adhering to their policies and procedures.

The biggest impact has been seen within the rapid response team, where having an RT on board to present the initial evaluation and root cause discovery allows for a more effective and efficient call. "We can be a part of customizing a solution with the team to serve the patient the best way," Wattier explains.

A perfect fit

Getting to this point in time hasn't always been easy, but the rtNOW team believes their services are making a big difference in the rural setting. They have big plans to expand to surrounding states as well, and they envision a day when telehealth RTs are available to rural facilities across the board.

"Our current models can only go so far; technology has advanced so quickly and we have many options to find the perfect fit into the whole equation between high tech and high touch in pursuit of better and more efficient care," says Wattier. "Introducing telerespiratory care to the generation of 'digital natives' will hopefully plant seeds for future discovery, development, adoption, and adaption of the telehealth care modality." ■

References

1. Bland K, Weil A: Analysis shows one-in-five U.S. rural hospitals at high risk of closing unless financial situation improves. MarketWatch. Available at: https://www.marketwatch.com/press-release/analysis-shows-one-in-five-us-rural-hospitals-at-high-risk-of-closing-unless-financial-situation-improves-2019-02-20. *Accessed March 26, 2019.*

2. American Hospital Association: Rural report: Challenges facing rural communities and the roadmap to ensure local access to high-quality, affordable care. Available at: https://www.aha.org/system/files/2019-02/rural-report-2019.pdf. *Accessed March 26, 2019.*

2018 AARC ANNUAL REPORT:

Adhering to the Mission

2018 rendered plenty of progress toward the profession's ultimate goals

"The work we did last year on behalf of our members… laid the groundwork for their overall advancement in the health care system as a whole."

The AARC's mission is to encourage and promote professional excellence, advance the science and practice of respiratory care, and serve as an advocate for patients and their families, the public, the profession, and the respiratory therapist.

That mission was in full view throughout 2018 as Association leaders buckled down to deliver ongoing programs and services to the AARC membership while at the same time planning for the future needs of respiratory therapists and the profession. "From the AARC Congress and the annual Summer Forum, to our webcasts and other continuing education programs, to our robust advocacy initiatives on Capitol Hill and more, we ensured that the needs of our profession were being met," says 2017–2018 AARC President Brian Walsh, PhD, RRT, RRT-NPS, FAARC. "The work we did last year on behalf of our members provided them with the tools they need to deliver high-quality respiratory care and laid the groundwork for their overall advancement in the health care system as a whole."

Here's a quick look at some of the major new initiatives the Association embarked on in 2018. ■

Onward and upward

For a number of years now, leaders in the profession have acknowledged the need for respiratory therapists to advance their education to keep pace with other clinicians working in health care today. What started with the "2015 and Beyond" conferences in the early 2000s has progressed to efforts to work toward an eventual bachelor's degree entry for the profession.

2018 saw new developments on this front, with a directive from the AARC Board of Directors (BOD) to the Position Statement and Issues Paper Committee in July to update the AARC's "Respiratory Therapist Education and Issue Paper." Initially released in 2016, these documents made a good first start on the goals of the Association in these areas, but the BOD felt strongly that it needed to take a more affirmative stance and also to offer a timeline that would assist the profession toward fruition.

As a follow-up, the BOD has also tasked the Position Statement and Issues Paper Committee to author a paper on "Future Educational and Credentialing Requirements for the Profession." A draft of this paper was recently distributed to membership for comment. Expect to hear more on this paper later in 2019.

Association leaders believe that advancing the education and credentials of the respiratory therapist is necessary. To help demonstrate the value that could come with a bachelor's degree entry, the Association also established the AARC Vision Grant to fund research by AARC members that compares outcomes among RTs with the associate degree and RTs with the bachelor degree.

Since establishing the Vision Grant, The AARC has funded two grant proposals.

Telehealth takes CENTER STAGE

The AARC has been actively supporting telehealth legislation pending in Congress for several years in the firm belief that telehealth represents the future of health care and that respiratory therapists must be included as covered providers. The Association decided to get more specific during the 2018 Capitol Hill Advocacy Day and Virtual Lobby Campaign by asking Congress to support a Telehealth Pilot focusing solely on respiratory therapists.

"We want all patients to receive the best possible respiratory care, wherever they reside," said President Walsh as the annual lobby events were getting underway in the spring. "And for some patients, physically getting to the clinic is not an option. We want to ensure respiratory therapists are included in telehealth services in order to meet the needs of all patients. The Telehealth Pilot is an important step in making this possible."

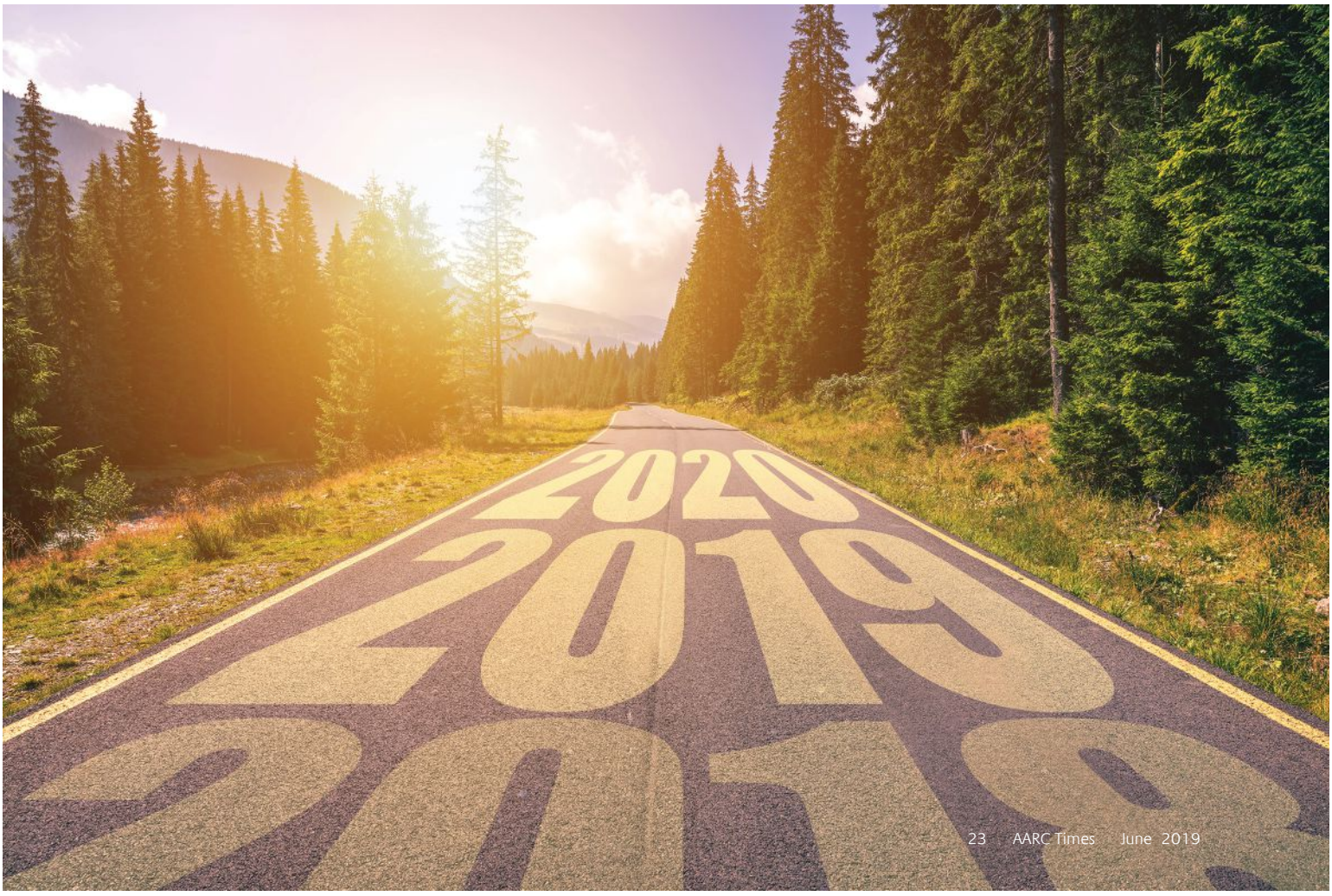
More than 130 members of the AARC's Political Advocacy Contact Team (PACT) from 43 states converged on Capitol Hill on May 1 to advocate for the pilot in 300 scheduled meetings with their representatives. The Virtual Lobby Campaign resulted in 33,595 messages sent to members of Congress in support of the "ask" that was taken directly to the Hill by the PACT members.

"With today's technology, we have the tools and resources to give all patients — inside or outside the clinic — the care they need," said President Walsh. "Through this Telehealth Pilot, we can show Congress the immense value and need for including respiratory therapists in telehealth services. This inclusion will enhance the health care options available to patients, and help them receive quality care at all times." ■

Horizon Goals

In keeping with the AARC's mission to advance the respiratory care profession, incoming AARC President Karen Schell, DHSc, RRT, RRT-NPS, RRT-SDS, announced the adoption of six Horizon Goals during her inaugural address at AARC Congress 2018 last December. The new goals were designed to be more "evergreen" in nature, creating a long-range timetable for the Association to follow that will proceed beyond the two-year term of the presidency to ensure the Association remains on track to achieve its most important objectives. The six Horizon Goals are:

- We need to advocate for our patients with respiratory therapists who are recognized and supported in all health care settings.
- We need to communicate our message to all stakeholders providing research-based outcomes and market the value of respiratory therapists.
- We need to grow our educational opportunities and become a valuable resource to the practice of respiratory therapy.
- We need to be recognized as the number one provider of respiratory therapy educational opportunities to all inter-professionals.
- We need to grow our membership and encourage all populations to be involved in promoting the profession for the best patient outcomes.
- We need continue to explore opportunities for the AARC to seek revenues to fund our mission and education, and to meet the needs of our patients and membership. ■



Enhancing the Digital Experience

In the digital age we live in today, the vast majority of AARC members are now accessing the Association and its resources through their device screens, and a couple of new membership benefits upgraded the experience in 2018.

A novel membership interface called "MyAARC" debuted late in the year. Available at https://my.aarc.org, the membership database platform consolidated an array of outdated and disparate systems into a new and cohesive entity featuring one central system of record. The system has improved data analysis and account management and is expected to significantly assist the AARC in serving the needs of its members. Now everything members need is available in one spot, from their renewal notices, to their CRCE transcripts, to the webcasts they want to view, and more.

Also debuting last fall was a new and improved digital version of *AARC Times*. Designed with reader-friendliness top of mind — it works great on any screen or device — the new format features a wealth of innovative features, including:

- A front page presented in colorful and clickable blocks that lead to all the stories in the issue.
- The ability to scroll down the page and see past issues in the same colorful, clickable block format
- Articles presented in a more web-based format, making them easy to read on any device.
- Audio versions of each article.
- A "print" icon for anyone who wants to print out articles or even the whole issue.
- Links to social media that make it easy to share articles in your news feeds.
- An email icon to send specific articles directly to friends and colleagues.

AARC Times will go all digital in 2020, and this new format bodes well for the transition because it delivers everything the print magazine did and much more.■

New Pulmonary Rehabilitation CERTIFICATE

Respiratory therapists have long staffed pulmonary rehabilitation programs, and those who work in this setting will be the first to tell you that it requires a significant learning curve for anyone coming from bedside hospital care. A new Pulmonary Rehabilitation Certificate Course developed in conjunction with the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR) was launched in January and is expected to help more RTs get up to speed in this specialized area while also providing them with a certificate demonstrating their skills to employers.

"This course is a great opportunity for individuals who have been working in pulmonary rehab for some time and for those who are considering joining the pulmonary rehabilitation team," said Shawna Strickland, PhD, RRT, FAARC, AARC associate executive director of member services. "The content was developed by leaders in the field and aligns with the AACVPR best practices." The course carries 12 hours of CRCE credit and is offered in an online format, making it a convenient option for those interested in increasing their expertise in pulmonary rehabilitation. ■

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Just for STUDENTS

The AARC's iconic knowledge competition, the annual Sputum Bowl, saw a significant makeover in 2018 with the introduction of the first-ever all-student Bowl. This rite of passage at the AARC Congress had experienced dwindling participation from clinicians in recent years due to a range of factors — not the least of which is the increasingly busy lives being led by working RTs — and Bowl organizers decided the future of the competition lay in the next generation of therapists.

The students-only Bowl was a big hit at AARC Congress 2018 in Las Vegas, with teams from across the country going head to head to see who would come out on top. First place went to the team from the Pima Medical Institute in Colorado. The Renegade Team from Collin College in Texas went home with second place. ■

Other Initiatives of Note

- A Summer Disease Webcast Series featuring educational programs on cystic fibrosis, pulmonary hypertension, asthma, and Alpha-1 was made available free of charge to AARC members. The series was designed to highlight chronic pulmonary diseases and empower respiratory therapists to actively participate in the diagnosis, treatment, and education necessary for these patients to live their best quality of life.
- A survey of home respiratory patients using supplemental oxygen was conducted with the help of AARC members to better inform the AARC's efforts with patient advocacy groups and other medical organizations working to advise CMS as it considered significant changes to supplemental oxygen policies. Questions on the four-item survey were aimed at learning more about the types of equipment being used by patients and the problems they were having with that equipment or their home oxygen service.
- The AARC Career Pathways Committee began looking at ways to highlight the importance of earning a bachelor's degree and to develop strategies to help more respiratory therapists reach that goal. Ensuring a smooth transition between an AS degree and a BS degree for those seeking to advance their education was seen as "job one," with guaranteed transfer credits topping the list of must-haves.
- Revisions were made to the AARC Corporate Partner program to allow for a three-tiered system based on a fixed rate for partnership level. Silver, Gold, and Platinum levels were each assigned an established bundle of benefits, and a secure website was launched to allow respiratory care companies to review the various levels and provide a non-binding commitment to the program for 2019. The revised program is more in line with the industry partnership programs offered by other health care organizations.
- New and updated eligibility requirements for the Fellow of the American Association for Respiratory Care (FAARC) designation were put into place. The changes aimed to revise credentialing and licensure requirements for U.S. nominees and included new credentialing requirements for international nominees. Changes were also made to streamline the nominations and selection process. The changes went into effect for the 2019 program and were announced in January of this year.
- The AARC's Disaster Relief Fund was activated for members affected by a range of weather and other natural disaster situations, from wildfires in California, to the eruption of the Kilauea volcano in Hawaii, to Hurricanes Michael in Florida and Florence in Virginia, North Carolina, and South Carolina. ■

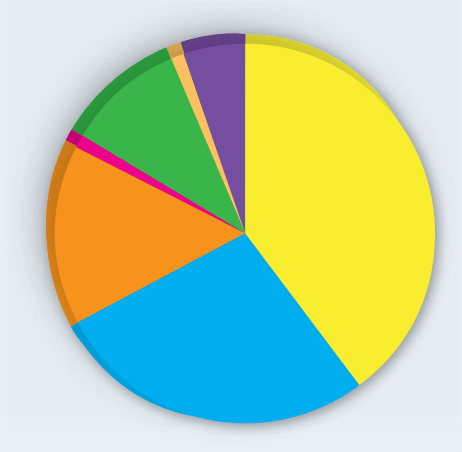
2018 AARC Annual FINANCIAL REPORT

In February 2019, the AARC engaged the public accounting firm Howard Inc. to conduct an audit of its financial operations. It issued an unqualified opinion stating that the AARC's financial statements were presented fairly and conform to generally accepted accounting principles.

In 2018, the AARC's total revenues (excluding investments) were $10,157,472, and total expenses were $10,105,437. Figures 1 and 2 highlight the sources of last year's revenues and expenses. Net assets at the end of 2018 were $29,971,949. ■

Figure 1.

Total Revenues in 2018 (Excluding Investments)



- Convention and Meetings – 39%
- Member Dues – 27%
- Publications and Advertising – 15%
- Grants – 1%
- Education – 10%
- Marketing – 1%
- Other – 5%

Figure 2.

Total Expenses in 2018

- General and Administrative – 18%
- Fundraising and Development – 4%
- Convention and Meetings – 23%
- Member Services – 20%
- Contributions to State Societies – 5%
- Education – 11%
- Daedalus, Enterprises, Inc. (publications) – 17%

Full Speed Ahead

Running a major health care organization at top speed is a challenge in any given year, but once again the AARC proved to be up to the challenge. By focusing on the profession's future while maintaining the member benefits that RTs have come to rely on, the Association affirmed its commitment to respiratory therapists and the patients who depend on them for the care and education they need to recover from illness and manage their conditions at home.

"I invite you to reach out to our colleagues, get them involved, seek opportunities to grow, mentor our future, and press forward," said Dr. Schell during her president's inaugural speech last December. "Just know that you have a choice today and your future lies within your power." ■

Editor's Note: The people featured on the cover this month include the following AARC members. The AARC thanks all members for your commitment to the Association and the profession!

1. Donald Raymond, Eau Clair, WI
2. Sherleen Bose, Yukaipa, CA
3. Joseph Garcia, Modesto, CA
4. Andi Gann, Orange, VA
5. Ed Salazar, Tamarac, FL
6. Lori Arnold, Cody, WY
7. Lutana Haan, Boise, ID
8. Mel Martin, Fallston, MD
9. Aya Matsushima, San Francisco, CA
10. Joel Wilmoth, Cookeville, TN
11. Rachel McGrath, Springfield, MO
12. D. Robert Handy, Clinton, UT
13. Steven Ling-Duan, Atlanta, GA
14. Amanda Richter, York, PA
15. Jamie Stoller, Cleveland, OH
16. Lacy Patnoe, Rapid City, SD
17. Michael Hess, Kalamazoo, MI
18. Jasmine Rivers, Bear, DE
19. Teri Miller, Macon, GA
20. Mark Yoder, Chicago, IL
21. Gabrielle Davis, Boise, ID
22. Jeff Anderson, Boise, ID
23. Laura Lewis, Layton, UT

TEAM TRAINING

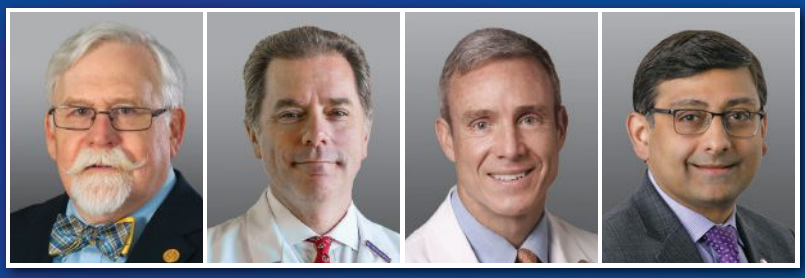
Current Topics in Respiratory Care 2019

- **Visualizing Mechanical Ventilation**
  By Thomas Piraino RRT
- **Alarm Fatigue: Implications for Patient Safety**
  By Marc Schlessinger RRT, RRT-NPS, MBA, FACHE
- **6 ml/kg Tidal Volume is Not Appropriate for All Patients**
  By Neal J. Thomas MD, MSc
- **State of the Art of ECMO: What's new?**
  By Heidi Dalton MD, MCCM
- **When Less is More**
  By Dean Hess PhD, RRT, FAARC
- **Journey to Zero Harm – Developing a Culture of Safety**
  By Michael Anderson MBA, MD
- **The ABCDEF Bundle and the Role of the Respiratory Therapist** *By Wesley Ely MD, MPH*
- **Everyone Needs Oxygen**
  By Jerry Krishnan MD, PhD

8 DVD Team Series
for Team Development
and Continuing Education

CRCE

EARN UP TO 8 CRCE



AARC
American Association
for Respiratory Care

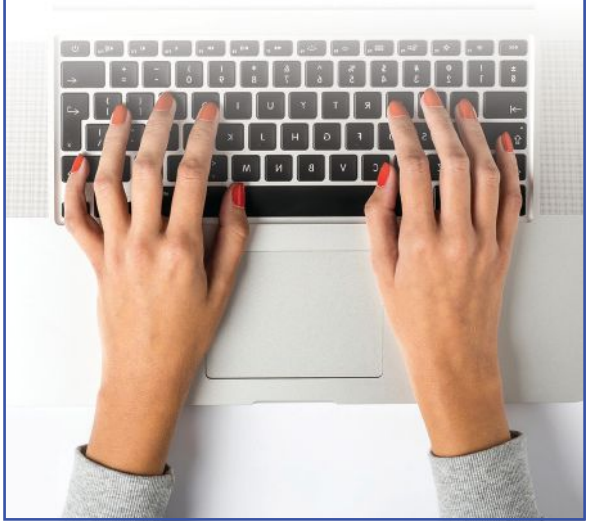
Learn more about the Current Topics series:
http://c.aarc.org/go/ct19-2

RC Currents

IN THE NEWS

Are You a Storyteller?

Every therapist has a story to tell about a favorite or most memorable patient that would interest others in our profession. Maybe it was when you knew you had made the right professional decision for a patient. Maybe it was when you first realized how much difference you were making in the lives of the patient and family. Or maybe it was just something a patient said or did that made you laugh or cry or be inspired to be a better RT. Our "Storytellers" column is the place to share your experiences with patients. Send your story to cathcart@aarc.org. ■



Secondhand Smoke Linked to Vascular Abnormalities

In the late 1980s and the early 1990s, the AARC worked with other groups and organizations to promote a ban on smoking in commercial aircraft. A new study out of Cedars-Sinai Medical Center suggests it was none too soon. Researchers there looked at 26 flight attendants who had nearly 14,000 hours of in-cabin exposure to secondhand smoke over 14 years on average before the airline smoking bans went into effect. All were never smokers and most had no known cardiovascular risk factors.

Results showed abnormalities on several measures of vascular function, including pulse pressure, augmentation index, and flow-mediated dilation, suggesting increased arterial stiffness and impaired function of the endothelial layer of the blood vessels — both signs of early vascular aging. The findings mesh with those from a previous study reporting a 3.5-fold increase in cardiac disease risk among female flight attendants. The current study appeared in a recent edition of the *Journal of Occupational and Environmental Medicine*. ■

Home Oxygen Fires Significantly Less Frequent in the U.K.

Fires caused by home oxygen equipment can be devastating for patients and their families. According to new data released by medical gas specialist BPR Medical, these fires are significantly more likely to occur in the United States than in the United Kingdom.

The study was based on input from 212 local health service organizations in England that reported the number of incidents and fatalities involving home oxygen recorded between 2013 and 2017. These statistics were then compared to existing U.S. statistics for the same five-year period. When the results were adjusted to reflect the equivalent patient population in England, the number of deaths over five years was nearly 20 times higher in the United States.

Why the difference? Better home oxygen safety measures implemented in England and Wales in 2006 may be the answer, say researchers. The measures call for patient education and risk assessments for people using home oxygen. The United Kingdom has also mandated the use of firebreaks across the entire home oxygen patient population. Also known as thermal fuses or fire stop valves, these devices stop the flow of oxygen in the event of a fire in the tube.

BPR Medical's white paper report on the study is available at www.firebreaks.info/uk. ■

Good News for Kids!

Everyone knows kids hate to get injections, so a recent recommendation from the American Academy of Pediatrics (AAP) should make lots of children — and their parents — happy this coming flu season. The AAP is planning to advise families that the nasal spray vaccine is an acceptable alternative to the influenza shot for children. The organization made the recommendation after reviewing the latest data on the two different kinds of flu vaccines.

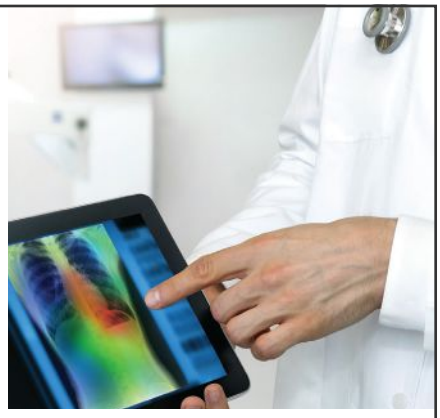
The recommendation came early because physicians generally place their orders for flu vaccine in the spring of the year. A formal announcement will be made closer to flu season. ■

Even One Cigarette a Day Is Too Many for Moms To Be

How many cigarettes can an expectant mother smoke each day before raising the risk that her baby will succumb to a sudden unexpected infant death (SUID)? According researchers from Seattle Children's Research Institute and Microsoft data scientists, the answer is zero. In a study that used computational modeling techniques to analyze maternal cigarette-smoking habits for all U.S. live births from 2007 to 2011, they found that smoking even one cigarette per day during pregnancy doubled the risk of an infant dying from SUID. The risk increased by odds of 0.07 for each additional cigarette smoked. The researchers estimate that 800 of the approximately 3,700 deaths attributed to SUID every year could be avoided if no women smoked during pregnancy.

"The most important takeaway is for women to understand that quitting smoking before and during pregnancy by far results in the greatest reduction in SUID risk," said lead author Dr. Tatiana Anderson. "For pregnant women unable to quit entirely, every cigarette they can eliminate will reduce the odds of their child dying suddenly and unexpectedly from SUID." The study appeared in a recent edition of *Pediatrics*. ■

Artificial Intelligence Helps Rule Out Benign Nodules



Lung cancer screening can save lives, but it results in a fair number of false positives as well, which has complicated recommendations on who should be screened. Researchers from the University of Pittsburgh believe their new artificial intelligence model can help.

The team gathered low-dose CT scan data from 218 high-risk patients who were later confirmed to have either lung cancer or benign nodules. Then they fed the data into a machine learning algorithm to create a model that calculates the probability of cancer. If the probability falls below a certain threshold, the model rules out cancer.

In comparing the model's assessment against the actual diagnoses of the patients, the researchers found that they would have been able to avoid 30% of the cases in which people with benign nodules underwent additional testing without missing a single case of cancer. Three factors were deemed most important to the model: the number of blood vessels surrounding the nodule, the number of nodules, and the number of years since the patient quit smoking.

The researchers published their findings in a recent edition of *Thorax*. ■

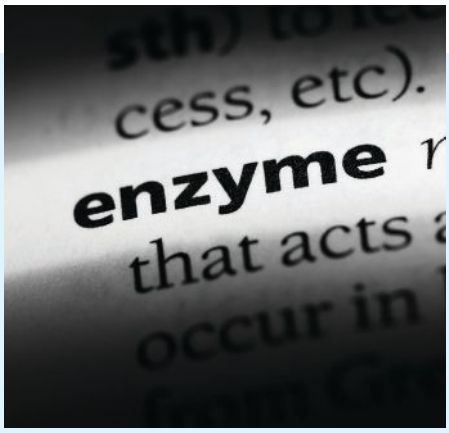
Novel Index May Predict Weaning Success

Canadian investigators have come up with a novel index based on wakefulness and depth of sleep that they believe can be useful in determining which ICU patients on mechanical ventilation can be successfully weaned from the ventilator. The study was based on an analysis of data on 37 patients at three Toronto-area hospitals who were scheduled for a spontaneous breathing trial (SBT) and had undergone polysomnography for 15 hours before the test. SBT was successful in 19 patients: the breathing tube was removed in 11 patients, and in the remaining eight patients, the breathing tube was not removed because, despite a successful SBT, other clinical factors indicated they were not ready for extubation. The SBT was unsuccessful in 18 patients. Results showed:

- Classic sleep stages as determined by conventional sleep scoring guidelines were not associated with success or failure of the SBT.
- Longer durations of full wakefulness were highly correlated with a successful SBT and extubation
- Poor correlation between sleep depth in the right- and left-brain hemispheres strongly predicted SBT failure.

"Patients under mechanical ventilation in intensive care units frequently suffer from severe sleep deprivation and, as a consequence, exhibit abnormal patterns of sleep or wakefulness, which explain in part the frequent development of delirium," said study author Laurent Brochard, MD, PhD. "Successful separation from mechanical ventilation necessitates an adequate response from a number of physiological systems, all of which could be impaired by sleep deprivation. We wondered whether assessing a period of sleep and wakefulness in the hours before attempting a separation from the ventilator could predict the success of this process."

The study was published by the *American Journal of Respiratory and Critical Care Medicine*. ■



New Treatment for CF and COPD on the Horizon

An enzyme called cathepsin S might hold the key to a better treatment for people with cystic fibrosis and COPD. Researchers from Queen's University Belfast in Ireland who previously discovered high levels of this enzyme in children with CF now believe that inhibiting it could help reduce the key symptoms of both diseases. "We know that this enzyme plays a key role in provoking symptoms of chronic lung diseases such as CF and COPD," said study author Professor Cliff Taggart. "We have now discovered that treatment to target this specific enzyme can significantly reduce inflammation, lung damage, and mucus obstruction, key hallmark features of CF and COPD."

The investigators worked with colleagues from Berlin, Paris, and the United States on the findings and are also collaborating with the State University of New York in Brooklyn and Imperial College London on an international study on COPD. The studies have been published in both the *European Respiratory Journal* and the *American Journal of Respiratory and Critical Care Medicine*. ■

What's the Best Time for the Flu Vaccine?

The flu vaccine generally becomes available in August, and people are urged to go ahead and get their annual dose. New research from investigators at the University of Pittsburgh School of Medicine suggests August might be too early in certain flu seasons. When the flu peaks after mid-winter, October might be better for older adults whose immune systems don't mount as strong of a defense to infections as those of younger people. However, the recommendation comes with plenty of caveats.

Using a computer model to compare a compressed vaccination schedule beginning in October with the typical schedule beginning in August, the researchers found that in seasons where the flu peaks after mid-winter, compressed vaccination would save as many as 258 lives and prevent up to 22,062 cases of flu, compared to status quo vaccination timing. But if the flu season peaked early, as it does in about one of every four seasons, the model projected that dozens to hundreds of older adults would die because they wouldn't have been vaccinated in time. In addition, if following a compressed schedule meant more than 5.5% of older adults who deferred vaccination ultimately didn't get the flu shot at all, then compressed vaccination would be deemed a failure because it would prevent fewer influenza cases than status quo vaccination.

What's the bottom line? "In all scenarios, simply getting vaccinated is the best way to avoid the flu," said lead author Kenneth J. Smith, MD, MS. "If the choice is between getting the influenza immunization early or not getting it at all, getting it early is definitely better." The study was published in a recent edition of the *American Journal of Preventive Medicine*. ■

Uncontrolled Asthma Impacts Schoolwork

Uncontrolled asthma takes a toll on more than just kids' health. Researchers publishing in the *Annals of Allergy, Asthma and Immunology* find that it affects their performance in school as well. The study involved 216 urban children who completed a clinical evaluation and home-based assessments. Thirty-three percent of the kids were African-American, 46% were Latino, and 26% were white. As the number of daily reported symptoms by children and caregivers increased, so did school absences, and teachers reported less work completed and worse quality of work. The effect was strongest in the Latino children in the study. "We found that not only do urban children with asthma experience a higher number of school absences when compared to their healthy peers, but there are greater disparities in academic outcomes when ethnic differences within the groups of children are examined," said study author Daphne Koinis-Mitchell, PhD. ■

New TB Vaccine in the Works

If work being done by investigators from the Texas Biomedical Research Institute pans out, people may one day be protected against tuberculosis via an inhaled vaccine. The vaccine has already been tested in mice, where it proved to be more effective than the current vaccine and worked without causing any damage to lung tissue. The researchers envision the vaccine being delivered by a device similar to an asthma inhaler. They plan to seek funding to expand their research to include testing on primates.

A new and better TB vaccine is sorely needed, say the investigators, because the current vaccine, which is delivered as an injection, doesn't protect well against the respiratory disease associated with TB and can't be given to people with compromised immune systems. The vaccine isn't used at all in the United States due to these concerns and the fact that TB transmission in the United States is already low. The vaccine has the potential to interfere with the tuberculin skin test, making it harder to determine who is carrying the illness.

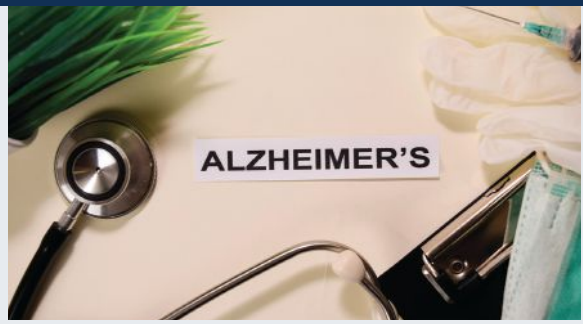
The inhaled vaccine study was published in *Mucosal Immunology* earlier this year. ■

Sleep Apnea Linked to Alzheimer's Disease

A new study out of the Mayo Clinic has linked sleep apnea to Alzheimer's disease. Using data from the population-based Mayo Clinic Study of Aging, researchers identified 288 people age 65 and older who did not have dementia. Their bed partners were asked whether they noticed if their partners stopped breathing during sleep.

Positron emission tomography brain scans then looked for buildup of the toxic protein tau in the entorhinal cortex, the part of the brain located behind the nose that is susceptible to accumulating tau. The dysfunctional tau protein forms tangles in the brains of people with Alzheimer's disease, contributing to cognitive decline.

Fifteen percent of the study group, or 43 participants, had bed partners who witnessed sleep apnea, and those participants had about 4.5% higher levels of tau in the entorhinal cortex than those who were not observed to have apneas during sleep. The finding held true even after investigators controlled for other factors that affect tau levels in the brain, such as age, sex, education, cardiovascular risk factors, and other sleep complaints.



"Our research results raise the possibility that sleep apnea affects tau accumulation," said study author Diego Z. Carvalho, MD. "But it's a chicken and egg problem." Specifically, the researchers question whether sleep apnea causes an accumulation of tau, or the accumulation of tau in certain areas causes sleep apnea. Dr. Carvalho believes more studies will be needed to get the answer.

The study was presented at a recent meeting of the American Academy of Neurology. ■

New Imaging Test for COPD

The bronchioles are the first parts of the lungs to be damaged in COPD, but at less than 2 mm in internal diameter, they are too small to be visualized on CT imaging and are not well reflected by pulmonary function tests. A new test may soon change that situation for the better.

In a landmark study funded by the National Heart, Lung, and Blood Institute, an international team of researchers led by Michigan Medicine has confirmed the ability of a noninvasive imaging biomarker to identify small airway damage in COPD. The technique, known as parametric response mapping (PRM), measures lung density during inhalation and exhalation. In the study, which was published in the *American Journal of Respiratory and Critical Care Medicine*, the investigators used PRM to examine lung tissue from patients with COPD undergoing lung transplantation as well as those with healthy donated tissue. They then mapped those samples back to CT scans taken before surgery, confirming that PRM was able to noninvasively identify small airway loss, narrowing, and obstruction.

"Now we have confidence in our ability to identify airway disease when imaging COPD patients," said senior study author MeiLan Han, MD. "PRM is already clinically available and used by University of Michigan clinical teams to assess patients with COPD. This is what we mean by bench-to-bedside medicine." Dr. Han delivered the Thomas L. Petty Memorial Lecture at AARC Congress 2017 in Indianapolis. ■

Vitamin D May Cut COPD Exacerbations in Half

British researchers who pooled results from previous studies on vitamin D and COPD have concluded that vitamin D supplements cut the number of COPD exacerbations in half for people with the disease who are vitamin D deficient. However, vitamin D supplements have no effect on exacerbations in patients without vitamin D deficiency.

The analysis included three studies involving 469 patients with mild, moderate, or severe COPD. Vitamin D doses ranged from 30 µg/day for six months to 2,500 µg/month for one year. None of the vitamin D supplements were combined with other supplements. The study was published in a recent edition of *BMJ*. ■

Many Parents Don't Ban E-cigarette Use Around Kids

Parents have been warned not to smoke around their children, but, according to a new study, they may believe that warning doesn't apply to e-cigarettes, especially in motor vehicles.

In the first study to examine the issue, researchers from Mass General Hospital for Children interviewed more than 750 parents who reported using traditional cigarettes, e-cigarettes, or both. Although 63% of dual users, 61% of cigarette users, and 74% of e-cigarette users reported having strict smoke-free policies in their homes, only 38% of those who smoked cigarettes and 22% of those who were dual users had strictly enforced policies banning cigarette use in both the home and the car. Only 19% of e-cigarette users had strictly enforced policies banning vaping in both the home and the car.

Among those who did not have vape-free car policies, 56% of both e-cigarette users and dual users reported that people used e-cigarettes in their cars when children were present.

"Frankly, it's frightening," said senior study author Jonathan Winickoff, MD, MPH. "Big tobacco markets e-cigarettes as healthy products without any consideration or warnings about the harms to infants and children. The truth is that all vape products create an invisible plume of nicotine and ultrafine toxic particles that spreads into the air and coats surfaces." The study was published in *Pediatrics*. ■

Traveler Beware, Says *Preventative Medicine*

Now that summer travel is underway, many people are staying in Airbnb venues. According to Johns Hopkins researchers, that could come with some unexpected dangers. In an analysis of 413,339 Airbnb venues in 43 cities in 17 countries, including the United States, they found that less than half of those that allowed smoking had smoke detectors. Smoke detectors were present in nearly two thirds of Airbnbs that did not allow smoking, and 33% of nonsmoking venues also had carbon monoxide detectors.

Carbon monoxide detectors were present in only 19% of venues that allow smoking. Airbnbs in Italy were least likely to have either smoke detectors or carbon monoxide detectors. Those in Scotland were most likely to have both. The researchers published their findings in a recent edition of *Preventive Medicine*. ■

Positive Results Seen for Peanut Patch

A peanut patch worn by kids age 4–11 with peanut allergy helped 35% of the children tolerate a significantly higher dose of peanuts before experiencing an allergic reaction than they had been able to tolerate prior to the treatment. Children wore the patch for one year, and treatment adherence was 98%.

Systemic allergic reactions to the patch were rare, and none were severe. Side effects were mainly limited to mild redness and swelling at the site of application, which resolved over the first few months in most of the kids.

"The positive results are reassuring, suggesting that the peanut patch could reduce severe allergic reactions from accidental exposure to small amounts of peanut, as might be the case when a product is made on shared equipment with peanuts," said study author Jacqueline Pongracic, MD, from Ann & Robert H. Lurie Children's Hospital of Chicago. "While not a cure, this kind of protection would make a huge difference in the lives of children with peanut allergy." The study was published in a recent edition of *JAMA*. ■

Strange But True…

No more headers? Italian researchers who used soccer trading cards to identify male professional soccer players who played in Italy between 1959 and 2000 have found that these professional athletes were nearly twice as likely to develop amyotrophic lateral sclerosis than the general population, and they developed the disease about 20 years earlier. Why? Repeated head injuries have been suggested as a possible culprit.

A case for going off leash: Our older patients need to get out and walk more, right? Yes, but maybe not with a dog. According to investigators from Penn Medicine, fracture injuries linked to walking leashed dogs have increased significantly, from 1,671 cases in 2004 to 4,396 in 2017. That's a 163% increase! ■

Industry Watch

ResMed acquires Korean home care company

ResMed has completed the acquisition of HB Healthcare (HBH), a privately owned South Korean home medical equipment provider. The move is expected to help the company reach millions more patients with sleep apnea, COPD, and other respiratory conditions in the country through both HBH and its wider network of distributor partners. "ResMed has reaffirmed its leading role in Korea's CPAP and respiratory care market, and its commitment to improving millions of Koreans' breathing and quality of life," said Kim Ho Kyun, ResMed Korea's sales and marketing director. "With HBH and our valued distribution partners in Korea, ResMed can maximize the number of people who can enjoy the benefits of life-changing cloud-connected sleep and respiratory therapy."

FDA approves carbon monoxide treatment device

The FDA has allowed marketing of a new device called ClearMate that is intended for use in the emergency room setting to help treat patients suffering from carbon monoxide poisoning. The device consists of a gas mixer, valves, meters, breathing circuits, an oxygen reservoir, and a mask and hoses. It delivers 100% oxygen to the patient, as well as a mixture of oxygen and carbon dioxide.

Tufts will tackle antimicrobial resistance

Tufts University and Tufts Medical Center have joined forces to more effectively address the rise and spread of dangerous superbugs. Their newly created Tufts Center for Integrated Management of Antimicrobial Resistance (CIMAR) will take a "One Health" approach that respects the critical relationship between people, animals, and the environment in conducting research, formulating policy recommendations, and designing educational programs to combat multi-drug-resistant infections. With experts proficient in research, patient care, and health care policy, the Center expects to make an enduring impact on the fight against antimicrobial resistance.

ATS Foundation grants support young researchers

The ATS Foundation has awarded one-year, $40,000 Unrestricted Research Grants to 14 researchers to help advance pulmonary, critical care, and sleep medicine. The grants span basic, clinical, and translational research in adult and pediatric medicine and are intended to give young investigators the leg up they need to get started in research. "Obtaining a competitive and rigorously evaluated ATS grant strengthens the ability of investigators to obtain major grants from the National Institutes of Health and other national and international agencies," said Dean Schraufnagel, MD, chair of the ATS Foundation. "This stepping stone not only helps the recipients be successful, but it provides for a continuous channel of scientists to make tomorrow a better world for all of us."

PFF urges caution regarding stem cell treatments

The medical advisory board of the Pulmonary Fibrosis Foundation (PFF) has issued an updated statement strongly cautioning patients with pulmonary fibrosis against using stem cell treatments outside of an approved clinical trial. According to the PFF, several cases of severe respiratory illness resulting from "stem cell" infusions from commercial centers have been identified and reported to federal regulatory agencies, and the direct-to-consumer marketing of stem cell therapies currently exaggerates the benefits. Patients are urged to learn about relevant and feasible clinical trials that may be available to them on the PFF website, pulmonaryfibrosis.org.

Lung cancer expert joins Mount Sinai

Fred R. Hirsch, MD, PhD, an internationally renowned authority on lung cancer treatment and research, has joined Mount Sinai Health System as executive director of the newly-created Center for Thoracic Oncology in The Tisch Cancer Institute. The new center will give lung cancer patients access to fully coordinated care that smoothly provides all the services needed — screening, diagnostics, pharmaceutical, surgical, nutrition, and psychological and social supportive services — for the best possible outcome.

FDA approves daytime sleepiness drug

According to Jazz Pharmaceuticals plc, the FDA has approved

its drug Sunosi™ (solriamfetol) to improve wakefulness in adult patients with excessive daytime sleepiness associated with narcolepsy or obstructive sleep apnea (OSA). The once-a-day treatment is approved with doses of 75 mg and 150 mg for patients with narcolepsy and doses of 37.5 mg, 75 mg, and 150 mg for patients with OSA. Sunosi is the first dual-acting dopamine and norepinephrine reuptake inhibitor approved to treat excessive daytime sleepiness in adults living with narcolepsy or OSA. "With this approval, a new, daytime medicine that can provide sustained wakefulness throughout the day will be available for patients," said Jazz Pharmaceuticals CEO Bruce Cozadd.

BI seeks approval of nintedanib for SSc-ILD

Boehringer Ingelheim has filed for regulatory approval of nintedanib for patients with systemic sclerosis-associated interstitial lung disease (SSc-ILD) in both the United States and Europe. Nintedanib, which is marketed as Ofev®, has been shown to reduce the annual rate of decline in lung function and is approved in the United States and more than 70 other countries for the treatment of idiopathic pulmonary fibrosis. Systemic sclerosis, also known as scleroderma, is a rare disease characterized by thickening and scarring of connective tissue throughout the body. Approximately 25% of patients develop significant pulmonary involvement within three years of diagnosis, and lung involvement is the leading cause of death.

Mallinckrodt names new CFO

Mallinckrodt plc has named Bryan Reasons as its new chief financial officer (CFO). Reasons previously served as senior vice president and CFO at Impax Laboratories, where he played an instrumental role in the company's 2018 combination with Amneal Pharmaceuticals, Inc. "As Mallinckrodt progresses toward the creation of two strategically focused public entities with the anticipated separation of the Specialty Generics and Amitiza® segment, it is critical that we have a seasoned leader in the chief financial officer role to help guide us through this transformation," said Mark Trudeau, Mallinckrodt president and CEO. "We are pleased to bring someone of Bryan's caliber on board, and believe his background and industry experience will help us meet these near-term needs."

Positive results seen for PAH drug

According to Actelion Pharmaceuticals US, Inc., an interim analysis from the Right Ventricular Remodeling in Pulmonary Arterial Hypertension (REPAIR) study of OPSUMIT® (macitentan) shows that treatment with OPSUMIT is associated with significant improvements in right ventricular (RV) function, including reversal of RV remodeling and reduced pulmonary vascular resistance, in patients with pulmonary arterial hypertension. The REPAIR study is a 52-week, open-label, multi-center study evaluating the effect of OPSUMIT on RV remodeling and function as determined with cardiac magnetic resonance imaging and right heart catheterization. The interim analysis was presented at the American College of Cardiology's 68th Annual Scientific Session.

New OSA treatment approved in Europe

Nyxoah S.A. has received CE Mark approval in Europe for their Genio® system. The battery-free, leadless, minimally invasive neurostimulator is capable of delivering bilateral hypoglossal nerve stimulation for moderate to severe OSA patients who have failed conventional positive airway pressure therapy. The CE Mark approval was based on data from the Nyxoah BLAST OSA (Bilateral Hypoglossal Nerve Stimulation for Treatment of Obstructive Sleep Apnea) clinical study, which evaluated the safety and performance of the system in seven centers in France and Australia. Results will be published in a leading medical journal later this year. The company plans to seek FDA approval soon.

U.S. company joins European CF initiative

Boston-based Proteostasis Therapeutics, Inc., a clinical-stage biopharmaceutical company working on therapies to treat CF and other diseases caused by dysfunctional protein processing, has been invited to join HIT-CF Europe, a pan-European strategic initiative that seeks to validate a personalized therapy approach for cystic fibrosis patients with extremely rare genetic mutations. The consortium collects tissue samples from CF patients with diverse genetic profiles and develops patient-derived organoids that are profiled *in vitro* via their response to drug candidates from the participating pharmaceutical companies. Based on the functional response, patients may be invited to participate in clinical trials with the investigational drugs to validate the ability of the *in vitro* response to predict clinical benefit. ■

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

Industry Update

Featuring information on products and equipment from manufacturers

Calendar of Events

AARC & State Society Programs

May 28 – May 30, 2019
Virginia Beach, VA
Symposium by the Sea
Contact: b.brooks233@gmail.com www.vsrc.org

May 29 – May 31, 2019
Oak Brook Terrace, IL
ISRC 51st Annual Conference "Fast Track Forward"
Contact: mcqu612@aol.com or www.isrc.org

July 8 – 10, 2019
Waco, TX
48th Annual Convention and Exhibition
Contact: danielschorrerrt@gmail.com or www.tsrc.org

July 20 – July 22, 2019
Ft. Lauderdale, FL
AARC Summer Forum
Contact: info@aarc.org

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