An Official Publication of the American Association for Respiratory Care
September 2019 Vol. 43, Issue 9 www.aarc.org $11.50

AARC Times

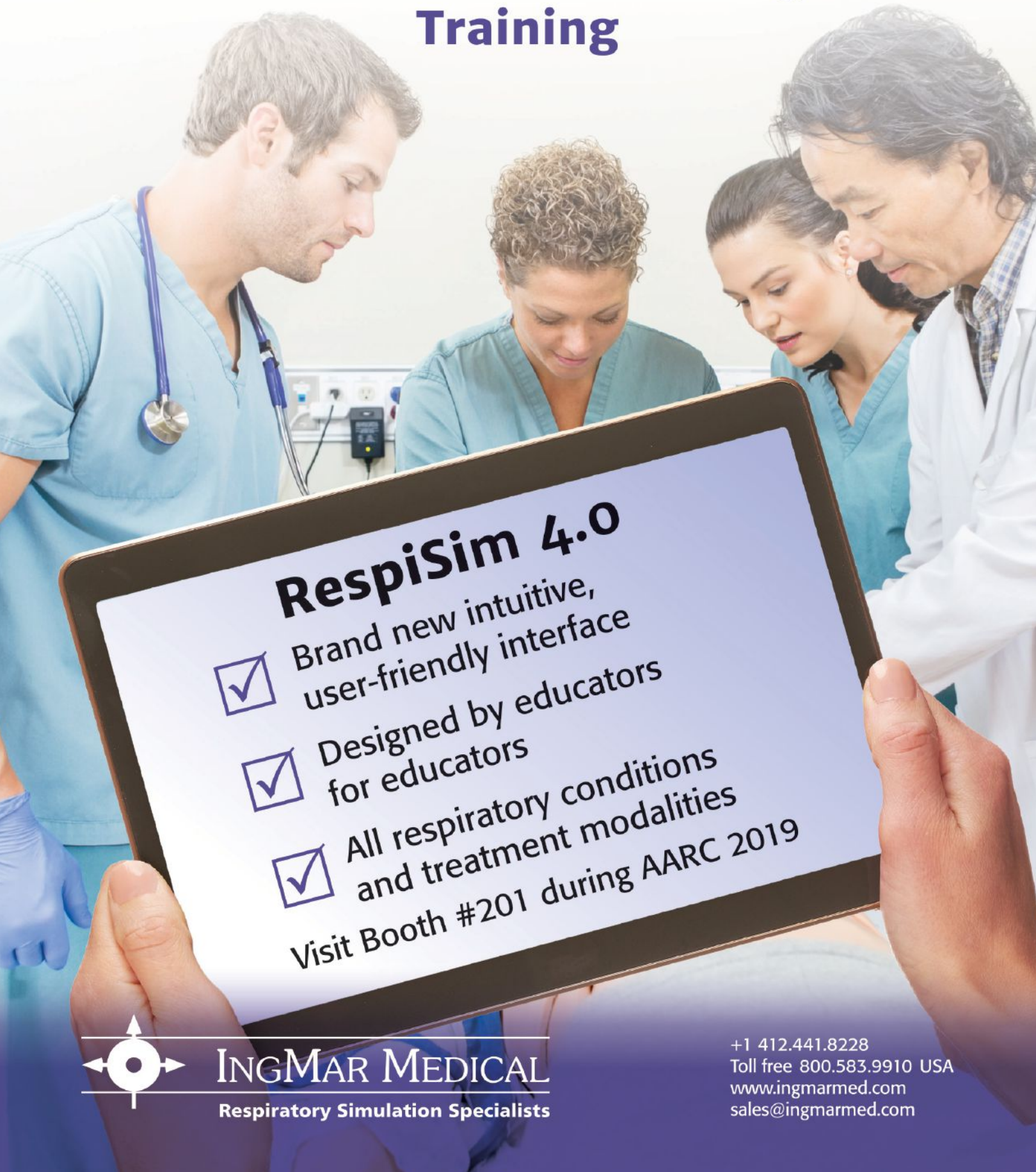
Let the Good Times Roll!

AARC Congress 2019

Fun Things To Do in New Orleans

WHO Resolution Makes Patient Safety a Global Priority

Preview the Next Generation Solution for Ventilator Management Training

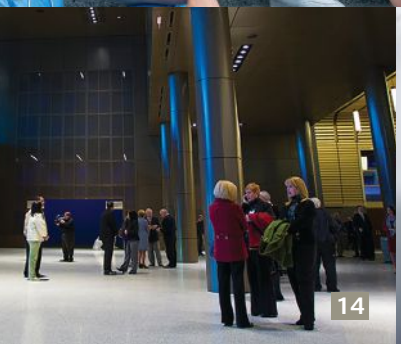


INGMAR MEDICAL
Respiratory Simulation Specialists

+1 412.441.8228
Toll free 800.583.9910 USA
www.ingmarmed.com
sales@ingmarmed.com

Table of Contents

Sept 2019
Volume 43, Issue 9



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/aarc/mission-statement/

American Association for Respiratory Care

Editor
Marsha Cathcart, BA

Managing Editor
Douglas Laher, MBA, RRT, FAARC

Contributor
Debbie Bunch, BA

Manager of Marketing and Production
Jeanette Chawdhury, MBA

Sr Graphic Designer
John Knotts

Director of Business Development
Sarah Vaughn, BS, RRT

Advertising Rates and Media Information
Contact: phil.ganz@aarc.org
Phil Ganz, 48 Abbey Woods Ln., Ste. 100, Dallas, TX 75248
Voice (972) 991-4994
Fax (888) 206-9006

Advertising Materials
Send production materials for AARC publications to advertising@aarc.org or AARC
9425 N. MacArthur Blvd.,
Suite 100
Irving TX 75063
c/o Advertising Department
Voice (972) 243-2272
Fax (972) 484-2720

AARC Times and Respiratory Care — official publications of the AARC

Daedalus Enterprises, Inc.
9425 N. MacArthur Blvd.,
Suite 100
Irving, TX 75063
Voice (972) 243-2272
Fax (972) 484-2720

Publisher
Thomas J. Kallstrom, MBA, RRT, FAARC

Printed in USA

Meet the AARC Staff

Annissa Buchanan

Meetings & Conventions Department Manager
annissa.buchanan@aarc.org

Michael Dennis

Information Technology
michael.dennis@aarc.org

Erica Coleman

Accounting
erica.coleman@aarc.org

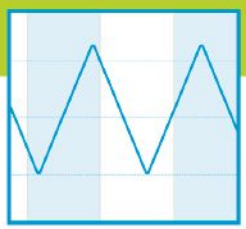
Jeanette Chawdhury

Marketing & Production Manager
jeanette.chawdhury@aarc.org

Differences matter

Not all high frequency chest wall oscillation (HFCWO) systems are the same. **Differences in HFCWO systems matter—to you and your patients.**

The Philips InCourage system is the only HFCWO system using triangle waveform technology — delivering brief, CPT-like thumps to the chest.[1,2]



Triangle Waveform

The Philips InCourage system triangle waveform technology **clears 20% more mucus** than competing technology.[1] Active venting is designed to allow a **deep, more comfortable breath during therapy.**

Outcomes

Only the Philips InCourage system has proven results from the world's largest bronchiectasis patient outcomes registry.[3]

See the results that 16,000+ RespirTech patients have reported after a year of Philips InCourage vest therapy:[4]

- **62% reduction in hospitalizations**
- **14% reduction in antibiotic use**
- **62% increase in rating their ability to clear their lungs as "good to excellent"[2]**

RespirTech helps thousands of people with airway clearance needs like bronchiectasis, COPD, cystic fibrosis, neuromotor conditions and more. We can help your patients too, in the hospital or at home. **Visit www.respirtech.com or call 800.793.1261.**

RespirTech®

1. Milla CE, Hansen LG, Weber A, Warwick WJ. High frequency chest compression: effect of the third generation waveform. Biomed Instrum Technol 2004; 38:322-328. Note: 8 CF comparing triangular waveform vs. sine waveform technology.
2. Milla CE, Hansen LG, Warwick WJ. Different frequencies should be prescribed different high frequency chest compression machines. Biomed Instrum Technol 2006;40:319-324. Note: 100 CF patient study comparing triangular vs. sine waveform technology.
3. RespirTech's bronchiectasis patient outcomes program consists of follow-up calls at periodic intervals for up to two years to encourage HFCWO adherence and ensure the device is properly set for individual needs.
4. Methodology: As of 6/30/19, self-reported data from over 16,000 bronchiectasis patients.

Information Contacts:

AARC Membership or Other AARC Services: American Association for Respiratory Care • 9425 N. MacArthur Blvd., Ste. 100, Irving, TX 75063 • (972) 243-2272 • Fax (972) 484-2720 • www.aarc.org

Respiratory Therapist Credentialing & Registration: National Board for Respiratory Care • 18000 W. 105th St., Olathe, KS 66061-7543 • (913) 895-4900 • Fax (913) 895-4650 • www.nbrc.org

Accreditation of Education Programs: Commission on Accreditation for Respiratory Care • 1248 Harwood Rd., Bedford, TX 76021-4244 • (817) 283-2835 • Fax (817) 354-8519 • www.coarc.com

Grants, Scholarships, Community Projects: American Respiratory Care Foundation • 9425 N. MacArthur Blvd., Ste. 100, Irving, TX 75063 • (972) 243-2272 • Fax (972) 484-2720 • www.arcfoundation.org

***AARC Times* (USPS 491-930)** (ISSN 0893-8520) is a monthly publication of Daedalus Enterprises, Inc., for the American Association for Respiratory Care.

Periodicals Postage: Paid at Irving, TX, and at additional mailing offices. POSTMASTER: Send form 3579 to *AARC Times*, Daedalus Enterprises, Inc., 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063-4706.

Change of Address: Six weeks' notice is required. AARC members should include their membership number when submitting an address change. Nonmember subscribers should provide old mailing label and new address. Send changes to *AARC Times*, Daedalus Enterprises, Inc., 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063-4706. Periodicals postage paid at Irving, TX.

Article and Feature Contribution: *AARC Times* welcomes AARC member contributions of feature articles and information for the regular columns. All materials should be submitted via email to Editor Doug Laher at laher@aarc.org . Letters from members will be considered for publication if they relate to specific articles appearing in *AARC Times* within the last three months. Editorials may be published if they are of interest to the AARC membership. The editor reserves the right to edit letters and articles without changing their meaning in order to suit legal and space requirements.

Subscriptions: Individual subscriptions are available for $90 per year (12 issues) in the United States or Puerto Rico; $125 per year in all other countries. Airmail postage is an additional $134 per year. Non-member institution subscription $140 per year. Member rates available at www.AARC.org. Single copies, current and back issues, if available, are $11.50. Write *AARC Times*, Daedalus Enterprises, Inc., 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063-4706. Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by Daedalus Enterprises, Inc.

It's Time to Fight for Our Patients in the Air

by Thomas J. Kallstrom, MBA, RRT, FAARC

Just think of happy thoughts and you'll fly.
—Peter Pan

Imagine having to deal with an adverse pulmonary event as a passenger or caregiver while in flight. This happens daily, and it calls into question just how prepared the airline carriers are when it comes to preventing or managing such an episode at 40,000 feet.

Unplanned pulmonary events happen with alarming frequency. In fact, a 1999 paper showed that in-flight medical emergencies occur in one per 11,000 passengers.[1] Respiratory illnesses are some of the most common in-flight complaints, accounting for up to 14% of medical emergencies occurring on commercial flights. Asthma and allergic reactions account for 2–4% of medical problems on board commercial airliners.[2] Unplanned medical emergencies can and do happen with alarming frequency.

In 2016, a seven-year-old boy traveling with his parents experienced an allergic reaction on a flight. At the time of boarding, the family was seated within close proximity to a dog. The boy immediately began experiencing an allergic reaction to the animal's dander, causing a departure delay. The flight attendant was able to relocate the family to seats that were a greater distance from the animal. However, the family ultimately was asked to disembark from the plane, and as they did, applause erupted from fellow travelers.[3]

This seems a bit extreme, but it shows the problem that, in some cases, airlines, and in this case fellow travelers, are not all patient friendly. Several months ago, I was on a flight back home to Dallas. While the passengers boarded, I counted eight dogs on leashes walking into the cabin with their owners. One was a pit bull that later got loose during the flight. I have to admit that, while the dogs were entering the cabin, I was consuming nuts that the airline provided, so I obviously was not helping the situation. Talk about setting up our patients for a compromising situation in a plane that recirculates air throughout the cabin!

about the author...

Thomas J. Kallstrom, MBA, RRT, FAARC, is executive vice president of the ARCF and executive director of the AARC.

Earlier this year, the AARC partnered with Allergy and Asthma Network (AAN), and we decided that we needed to determine if these types of situations play out for its members. A survey was posted online, where over 600 patients and caregivers completed it. What we found was that patients in fact have experienced these episodes while in flight. In fact, 55% of respondents claimed they or a family member had flown on a commercial air carrier and experienced an allergic reaction or asthma flare-up, and 65% claimed it was due to exposure to an allergen in the aircraft.

Other survey observations included:

- 26% claimed exposure to animal dander on a plane;
- 20% claimed exposure to food products to which they were allergic;
- 63% claimed they resolved their problem in flight by using an autoinjector or albuterol inhaler;
- 70% said their actions resolved the issue; and
- 67% claimed that there was no medication available on the plane for their particular emergency.

You must admit that this is scary stuff, and these responses demand that we take action to prevent and eliminate these obstacles that our patients face while using domestic air transportation.

Our next step was to reach out and get a sampling from over a dozen airlines to better understand what precautions they take to prevent adverse events or what they do once an event occurs. We did a combination of reviewing this information from their web site and

speaking with a representative of the company as needed. We surveyed 13 airlines:

- United
- Southwest
- American
- Spirit
- Delta
- JetBlue
- Alaska Airlines
- Frontier
- Air Canada
- British Airways
- Qantas
- Swiss Airlines
- Singapore Airlines

Some additional highlights that we identified were:

- 23% of airlines still serve peanuts;
- 92% serve other varieties of nuts;
- 53% of airlines offer a buffer zone (seating away from obvious triggers);
- 77% allow dogs (not just service dogs) in the cabin;
- 85% allow cats;
- 31% allow birds, rabbits, and guinea pigs/hamsters;
- 77% the airline claim to train attendants for allergic awareness;
- 23% allow early-boarding options which allow patients to clean their seat and tray; and
- 46% of the airlines have Epi Pens in the first aid kit.

Prevention of an adverse reaction on the patient's part is key, and patients and caregivers have the power to do something about it. Interestingly, it does not happen all that often:

- 85% of the patients or caregivers did not ask to be seated away from a pet or animal;
- 73% of the patients or caregivers did not ask to be seated early to wipe down the seat and tray; and
- 65% of the patients or caregivers did not request accommodation at check-in or when booking the flight.

In a perfect world, we would have air carriers that are following a federal mandate that, at the very least, requires the inclusion of injectable epinephrine and/or albuterol inhalers with a spacer in their emergency kits, as well as training that would teach attendants and pilots how to recognize an adverse event and how to respond appropriately, especially as it pertains to asthma exacerbation, allergies, and anaphylaxis. Additionally, if airlines were required to make an announcement asking passengers not to consume food containing peanuts or to only offer peanut-free meals, perhaps we might see less of these events on board.

Our next step will be to share this data with patients as well as the airlines. We hope to score the airlines that were part of the survey. Although it may be presumptuous to think we could actually change the practices of the airline industry, we definitely do not mind making the effort. Remember, several decades ago, the AARC was one of the lead agencies that brought about the prohibition of smoking tobacco in commercial aircraft. The most important motivation for this study is safety for our patients, whom we hope will be able to use this information as a guide while planning their travel arrangements.

Stay tuned for more information, as the AARC Board of Directors is also studying the issue of traveling with oxygen, and we will likely be sharing more about this as another topic in a future column. ■

References

1. Martin-Gill C, Thomas JD, Yealy DM. In-flight medical emergencies: a review. JAMA 2018;320(24):2580–2590.
2. Sánchez-Borges M, Cardona V, Worm M, Lockey RF, Sheikh A, Greenberger PA, et al. In-flight allergic emergencies. World Allergy Organ J 2017;10:15.
3. Brown G. Passengers applaud as boy having allergic reaction is removed from plane. Tribune Media Wire. Feb. 25, 2016. Available at: https://wreg.com/2016/02/25/passengers-applaud-as-boy-with-allergies-is-removed-from-plane

When Disaster Strikes, RTs Are There

by Debbie Bunch

AARC Times was just a few months old when we covered our first disaster situation involving RTs tin our October 1977 issue. The article was titled "Blackout '77: The 24-Hour Night Shift," and it focused on the massive power outage that hit New York City the evening of July 13, 1977. Despite generator backup, some hospitals had full power only in some areas and were being forced to treat patients — including many who were victims of the violence that broke out in the darkened streets — in less than ideal conditions. As you would expect, they were operating in overdrive, and we chronicled the experiences of respiratory therapists caught in the crosshairs.

We've continued to cover major disasters over the years, their impact on RTs and patients, and the efforts of the AARC to support members affected by them through the Association's Disaster Relief Fund. Whether it be a tornado, a snowstorm, or a hurricane, we have reached out to RTs on the ground — including those volunteering for the federal government's Disaster Medical Assistance Teams — to see how they were helping facilities maintain quality patient care in the face of enormous challenges.

We were there in the aftermath of Hurricane Katrina in 2005, talking not only to RTs from New Orleans who rode out the storm in their hospitals, but also to RTs across the country who rose to the occasion to help care for the refugees created by the storm. But our biggest disaster coverage undoubtedly came in 2001 following our nation's worst disaster of all time: 9/11. The October article was titled, "Never To Be Forgotten: Sept. 11, 2001," and it shared the stories of a number of therapists whose lives were directly touched by the attacks that fateful day.

630+ patients

We began our account with Sterling Williams, BS, RRT, and his colleagues at St. Vincent's Hospital in lower Manhattan, who saw more than 630 patients in the hours after the twin towers fell, including 88 police officers and 48 firefighters. "A large proportion of the injuries during the first few days involved smoke inhalation or other problems related to breathing dust," he told us. His RTs remained focused, and they were rallied by their colleagues in other area hospitals. Said Williams, "They all offered to come in and volunteer their services to support us. I was very moved by this response, and I thank all of them."

Tom Johnson, RRT, and Ellen Becker, PhD, RRT, worked with other faculty members at Long Island University to set up a first aid station for the sea of humanity streaming across the Brooklyn and Manhattan Bridges toward their campus. "We serviced the walking wounded until 10:30 p.m.," said Johnson. While most of them were suffering from minor injuries and smoke inhalation, they evacuated three severe asthmatics, one heart patient, and a woman who suffered chest trauma after being trampled in the panic that ensued when the towers were hit. According to Johnson, she made it as far as she did on pure adrenaline.

Alan Wyatt, BS, RRT, and his coworkers watched the horror unfold from their vantage point across the Hudson River at Newark Beth Israel Medical Center, feeling helpless as they saw the towers crumble. While the majority of patients sent to New Jersey ended up at Jersey City Medical Center, Wyatt said his hospital received four patients, the worst of whom was suffering from multiple fractures. "The hospitals were unsure what we were receiving. Because of this, we kept our staff until around 9 p.m. to be sure the worst of the patients were cared for," he said.

Sindee Karpel, MPA, RRT, and her students in the respiratory care program at the Borough of Manhattan Community College were just four blocks from ground zero. She said the first crash was so loud their building actually shook. The school shut down almost immediately, and Karpel told her students to head north to safety. Some of them had friends and family members who died in the attacks that day, and Karpel was doing her best to offer all of them the support they needed to cope with the tragedy. "I have been in constant contact with our senior students via email," she told us. "They, in turn, have been sharing some of their experiences and feelings."

One student summed up the general consensus of the whole nation in the aftermath: "In Dedication to the Victims of the World Trade Center Tragedy: I may not

know your name, or recognize your face, yet you are my hero . . . . Across the country, our hearts are heavy with sadness and pain . . . . In your honor, I pray."

Called to serve

Albert Heuer, MBA, RRT, RPFT, witnessed the destruction from his office window at the University of Medicine and Dentistry of New Jersey. After the second tower come down, he headed out to the University Hospital to see if he could be of assistance. Staff were busy enacting their disaster plan, and he accompanied several back to the school to get training ventilators and bring them to the hospital in case they were needed. Not long after, his squad at the Middletown, NJ, Marine Police Auxiliary was activated, and he was instructed to report to the boats at Red Bank. From there he was sent to Highlands, where ferries from lower Manhattan were arriving with those escaping the carnage. "Evacuees, police, and volunteers were everywhere," he reported. He worked alongside other volunteers to attend to minor injuries and ensure basic needs for food and housing would be met.

Mark Gaines, MS, BSN, RN, RRT, EMT-B, was called up for official duty as part of the Massachusetts Disaster Medical Assistance Team, MA-2. The team was activated that afternoon and rushed to ground zero, where they joined teams from Rhode Island, New York, New Jersey, and Florida who were also sent to help. "We provided medical support on the scene for the city of New York, working 8- to 12-hour shifts," said Gaines. "It was one huge operation."

As a medic with the 101st Cav HHC unit of the National Guard, Ed Heavey, CRT, took part in the initial recovery efforts as well and was amazed at the scene that met his unit as they made their way through the streets of Manhattan to get to the site. "There was about two inches of soot coating everything, and by the time we reached Trinity Church, the smoke was so thick you really couldn't see more than two blocks," he told us. "The air stung our eyes and burned our lungs." He was still on the scene when we talked to him about a week later. "We're here to do whatever is asked of us, and we'll be here as long as we're needed," he said.

Cover shot

Of course, New York wasn't the only city affected. Planes crashed into the Pentagon in Washington, DC, and into a field in Shanksville, PA. Joe Lynott, MS, RRT, and his colleagues at Washington Hospital Center received 15 victims, most of whom were suffering from severe burns over 35–75% of their bodies. Medical teams consisting of a physician, nurse, and respiratory therapist were assigned to each case.

"People were anxious but focused on what needed to be done," he reported in a sidebar to our main story. When President Bush and First Lady Laura Bush visited the facility to speak with the victims and their family members, several of the therapists were on hand along with other medical personnel. Said Lynott, "Although I did not meet him, the therapists who did said how they were impressed with his genuine concern and compassion for the victims and his show of support for our efforts."

It was Lynott who acquired the photo of the President and First Lady greeting hospital staff that graced our cover in that very special issue of *AARC Times*. ■

LAWYER FEES

COURT COSTS

SETTLEMENT PAYMENTS

The financial consequences of a liability matter can be high.

Proliability® powered by Mercer providing an affordable solution for respiratory therapy professionals.

As a respiratory therapy professional, you earn a living from the care and expertise you provide. That puts you at risk for potential lawsuits, no matter how well you do your job. The financial consequences can be extensive—affecting your career, family and livelihood.

With Proliability, you'll have expert help if a licensing board matter or lawsuit happens to you. Proliability offers you access to:*

- **Premium discounts,** which can reduce your annual cost
- **High limits of liability** of $1 million per incident/$6 million annual aggregate
- **Contemporary coverage** reimbursement for licensing board matters, HIPAA fines and more!
- **Risk management** information and Helpline

Let Proliability help you protect your financial well-being.

Proliability reimburses respiratory therapists

$4,004

on average for Licensing Board Matters.**

proliability®
powered by Mercer

AARC

Request a quote and apply today! It's easy to do:

Visit us at Proliability.com/88706

Or call 1-800-375-2764

Program Administered by Mercer Health & Benefits Administration LLC
In CA d/b/a Mercer Health & Benefits Insurance Services LLC • AR Insurance License #100102691 • CA Insurance License #0G39709
Underwritten by Liberty Insurance Underwriters Inc.

*This literature is a summary only and does not include all terms, conditions, or exclusions of the coverage described. Please refer to the actual policy issued for complete details of coverages and exclusions.
**Average reimbursement paid is based on data from Liberty Insurance Underwriters Inc.

Should I Stay or Should I Go?

If you've never been to AARC Congress before, the tale of these four RTs might help you make up your mind

by Debbie Bunch

This is a tale of four respiratory therapists. Let's call them John and Jill and Jeff and Jen. We first see them back in the summer of 2018 when each of them hears about the upcoming AARC Congress in Las Vegas.

For John, the news comes via an AARC email promoting the event. Jill learns about it from a colleague in her department who attends every year and suggests Jill joins her. Jeff finds out about the meeting during an informational session on his department's career ladder; the Congress is listed as one of several ways to advance to the next step. Jen realizes the meeting is coming up when her medical director puts out a query to the whole department asking for input for a presentation she will be making there.

None of these therapists has ever been to an AARC Congress before, but 2018 turns out to be the year that all of them decide to give it careful consideration. The pros and cons are weighed.

John: *The program looks interesting, but oh my gosh, the expense! My department won't cover the costs for a lowly staff therapist like me. Maybe this meeting is really just for managers.*

Jill: *It would be so much fun to go to the meeting with my coworker, but honestly, I can get the CRCE I need to maintain my license for free at work, so why would I fork over that kind of cash to go all the way to New Orleans for it?*

Jeff: *I do want to advance up the career ladder, and I can see how attending the Congress would help me do that. I'm such an introvert though. Four days in that big crowd of RTs just seems too intimidating.*

Jen: *The meeting does seem awesome, and it would be great to hear my medical director give her presentation. But then what? There are so many things to choose from on the program that I honestly wouldn't know where to start.*

Cost-benefit ratio

Attending the AARC Congress is a big decision — especially the first time you decide to go. Despite the advantages, a great many RTs struggle with the barriers, real or imagined, that they perceive to be standing in their way.

According to AARC Associate Executive Director Doug Laher, MBA, RRT, FAARC, money is indeed the biggest challenge for most attendees. While some respiratory care departments will cover the costs of attendance for the department manager and perhaps even the assistant manager or educational coordinator, reimbursement for bedside clinicians is a luxury not all departments can afford. And that leaves many therapists like John thinking that perhaps this meeting isn't really for anyone outside of the top jobs in the department.

Nothing could be farther from the truth. The vast majority of the program at any Congress is geared directly toward bedside clinicians, because it is the bedside clinicians who deliver the hands-on care that patients need to recover from or manage their respiratory conditions. While Laher recognizes that funding your attendance can be a challenge, he says many RTs who make it to the meeting year after year simply make it a priority as a professional expense and save money for it year-around. And depending upon your financial situation, those expenses may be eligible to be written off on your taxes.

Laher reminds potential Congress-goers of the old adage: How do you eat an elephant? One bite at a time. "If you think of the overall cost of the meeting, it can become a bit daunting," he says, "but if you break the expenses down into smaller buckets, it becomes easier to identify opportunities to save." If you're like Jill and know someone who is going, share a room to save on the cost of the hotel. You can save almost $200 on food costs by attending the Welcome Party, Sputum Bowl Reception, and industry-sponsored breakfast, lunch, and dinner sessions, taking advantage of the free meals they offer. And by all means, forego the rental car — parking is expensive, and at most Congresses (including this year's event in New Orleans) everything is within walking distance.

World-class education

As our friend Jen noted, the Congress program can be overwhelming to a first-timer. It is extensive, and deciding which sessions to attend requires more than just a few minutes of your time. Luckily, it's also broken down according to specialty area, so depending on your role in your organization, you can fairly easily zero in on the sessions that will be most meaningful for you. You can also go over the program with your department manager and ask which sessions he or she would most like you to attend. Indeed, if more than one RT from your department will be headed to the meeting, you can easily "divide and conquer" — each attending different sessions and bringing twice the information back to the department.

Karsten Roberts, MSc, RRT, RRT-ACCS, is a regular Congress-goer who attests to the world-class education you'll find at the meeting. "Lectures in the field of mechanical ventilation have had the biggest impact on my

Karsten Roberts, far right, had a great time getting together with some of his Boise State colleagues at AARC Congress 2018.

ability to deliver high-quality patient care," says the staff therapist at the Hospital of the University of Pennsylvania in Philadelphia. "I often find myself considering topics from past lectures, from early mobility to spontaneous breathing and ventilator liberation — these topics have all helped me address the most critical needs of my patients."

As a budding researcher, he appreciates the chance to learn more about what his colleagues are studying, too. "One of my favorite educational opportunities is the Open Forum, where nearly 300 clinicians present their work on respiratory research," he says. "It gives other people the chance to see what research is being done, and helps sparks ideas for future research." He's been able to meet leading investigators in the field through his attendance at the Congress, and that has opened new doors. "I am still new to research, but it has given me the opportunity to work with researchers such as Rich Branson and Natalie Napolitano," says Roberts. Indeed, he was a co-author on three Open Forum abstracts last year alone.

Networking for all

What about Jeff's fear that he would just be swimming all alone in a big sea of RTs he's never met before? Respiratory therapists who regularly attend the meeting would allay those fears in a heartbeat. Networking reigns supreme at any AARC meeting, and everyone's invited to take part. "Networking opportunities started for me at the very first Congress I ever attended," says Mandy De Vries, BSRT, RRT, from MUSC Children's Hospital in Charleston, SC. "I have met and made friends from all over the U.S., as well as had the opportunity to meet other like-minded individuals who introduced me to the many fields that a respiratory therapist can get into."

Elvis was in the building last year in Vegas, and Mandy De Vries, third from the right, joined several of her colleagues in this photo op.

She says the lectures offered at the Congress are great, but often the people you meet and the side conversations you have with them add significant value to the meeting because they can guide or even alter the way you care for your patients. They can also drive your motivation for the field. "Sharing my journey of why I wanted to become a respiratory therapist with others has been incredible," says De Vries. "And in turn, the stories that have been shared with me have helped me continue to build on my respiratory career and why I love our field."

According to De Vries, the support she receives from the therapists who attend the Congress keeps her motivated to continue her educational journey in respiratory care and encourages her to search out new ways to do better and be better for her patients and her profession. In fact, she's never missed an AARC Congress since attending her first.

Emilee Lamorena, left, enjoyed touring the exhibit hall with her boss at Lurie Children's, Dana Evans, MHA, RRT, RRT-NPS, at the meeting in Vegas.

Let's get social

Education and networking are the main reasons to attend any Congress, but that doesn't mean you won't find some fun along the way, too. If you'll be there along with friends from work — like Jill — it's easy to plan some dinners out and maybe even a sightseeing excursion or two (for more on what you'll find in New Orleans, see our article on free things to do in this issue).

But even if you don't know a soul, you will still find plenty of opportunities to have a good time. According to Emilee Lamorena, MSc, RRT, RRT-NPS, clinical manager of respiratory care and the residency coordinator for the

RT New Graduate Residency at Ann & Robert H. Lurie Children's Hospital in Chicago, IL, social events abound at the Congress, and friendly faces will meet you at every turn.

"Outside of the professional development and educational offerings at AARC Congress, there are *many* fun opportunities to connect with other respiratory therapists from around the world!" says Lamorena. "These can range from large, conference-wide events with live music and dancing to smaller social events hosted by individual vendor companies." She notes many hospitals also host small networking lunches and dinners for RTs in their areas so that therapists who live near each other can get to know each other better. Add in the excitement that always comes with the major venues where the Congress is held, and you can't help but have a great time.

Lamorena says it all combines with the education and professional development opportunities to rejuvenate, re-excite, and re-ignite an RT's passion for the profession. "In our day-to-day stress, it is easy for us to become 'tunnel-visioned' and forget to see the big picture of why our work and our profession are so important," she says. She loves being able to meet and connect with new therapists and relishes the chance to share her life and her passion with them in fun and relaxed settings. "I have met new mentors and friends at all of the fun events," she says. "I always leave Congress feeling not only more clinically competent, but a more engaged member of our respiratory care profession."

Where are they now?

So what about our four RTs from the beginning of this story? What decision did they make and how has that decision impacted their careers and their patients in the year hence? Let's see what they decided, and where they are today.

- John opted not to go the meeting. It would have meant foregoing the 50-inch flat-screen TV he'd had his eye on for so long, and he decided it just wasn't worth it. He's still working as a staff therapist and doing just fine, though. Nothing has really changed, career-wise, for him in the ensuing months.

- Jill took her colleague up on her offer to attend the meeting with her, and they roomed together in Vegas to save on costs. She met some great therapists at the meeting, including a couple of managers from her hometown. They invited her to get more involved with her state society, where both hold leadership positions. Jill went to one of their meetings when she got home and ended up running for a chapter representative position, which she won. She met more managers in the process, and now she's the day-shift supervisor at one of their hospitals.

- Jeff decided meeting attendance really might be the step up on the career ladder that he was looking for, and he pushed aside his fears about going alone. He went to the session for first-time attendees and wasn't in the conference room but a few minutes before other new attendees started introducing themselves and asking him to join them in a little get-together at a local restaurant that evening. He spent nearly all his free time with this new group of friends, and they all exchanged emails and phone numbers before they left. One was an ECMO specialist who was presenting an abstract on the topic during the Open Forum. A few months later, Jeff had a patient for whom the medical staff had lost all hope. He immediately texted his new friend, who rallied the forces in his state-of-the-art ECMO unit to help the staff at Jeff's hospital get their patient to the definitive care she needed for a chance at life. That patient is now home and doing well.

- Jen paged through the program a couple of times before finally deciding to throw in the towel on 2018 attendance. It was just too much to digest. Her medical director did make her presentation though, and as it turns out, a couple of RTs from the department were there to hear it and ended up going out to dinner with the medical director that evening. Jill is doing fine — like John, still in her same job and loving it.

But those other two RTs are now working on a clinical research project with the medical director, and she can't help but wonder how that will impact their futures in the department and whether she could have been one of them had she just made a different decision back in the summer of 2018.

Opening doors

If you're still on the fence about attending AARC Congress 2019 in New Orleans this Nov. 9–12, consider the experiences of these four therapists. Not attending doesn't mean your career won't stay on track. But attending just might open up some really important doors that could give your career an extra boost — and more importantly, improve care for your patients at the same time. ■

Headed to New Orleans? Here Are Four Sessions You Won't Want to Miss!

AARC Congress 2019 is just a couple months away, and the entire Program is included in this issue of *AARC Times*. You'll find it online at www.AARC.org, too. Four of this year's presenters provide an additional look at the topics they'll be covering for us here — New Orleans

Update on Pediatric Pulmonary Function Standards

by Susan Blonshine, RRT, RPFT, AE-C, FAARC

Pulmonary function testing in the pediatric population offers challenges over a significant age and developmental range. Historically, standards related to pediatrics have been limited. That started to change in 2005 when the accepted adult standards published by the American Thoracic Society and European Respiratory Society began to address pediatrics. Subsequently, a document specific to preschool children was published in 2007. In 2013, an additional document, *Optimal Lung Function Tests for Monitoring Cystic Fibrosis, Bronchopulmonary Dysplasia, and Recurrent Wheezing in Children Less Than 6 Years of Age,* was published.

Most recently, a standard specific to the multiple-breath washout (MBW) technique for preschool children was published in 2018. Validated equipment is available for age six years and up, so the focus has changed to the two- to six-year-old group. The opportunity to identify and intervene early in a disease process can have a significant impact on care and outcomes. The document addresses the available evidence and recommendations for procedures to obtain robust MBW results. The document also highlights the unanswered questions that we should address in future work.

Pulmonary function testing continues to play a key role in the diagnosis and management of chronic pulmonary conditions in children under six years of age. The challenge of testing in these younger populations has at times limited objective physiologic assessments in their care. We need to understand those techniques that are safe, feasible, and clinically useful. We also need to understand the devices, designs, and test analysis issues that impact the accuracy of test results in this younger population. Studies and data evaluating and grading the quality of pediatric testing have been published over the past few years, with the advent of the Global Lung Initiative for reference equations.

This talk will review the development of standards and challenges specific to pediatrics that have informed our understanding and quality of testing in this specific population. Future research needs to provide continued improvements in pediatric testing will also be addressed. ■

Susan Blonshine is CEO and president of Tech Ed Consultants, Inc., in Mason, MI.

Succession Planning: Developing Future RT Leaders

by Cheryl Hoerr, MBA, RRT, CPFT, FAARC

Have you ever been in a situation where the work couldn't be done because a key person wasn't there? Maybe it was a therapist with some specialized knowledge about an unfamiliar piece of equipment, and no one else felt competent enough to work with it. Or perhaps it was the person who was in charge of gathering and reporting performance improvement data and no one in the department could find the program and didn't really know what needed to be done. Or it could have been the manager, the one who always finds the answer for you, and you're left hanging when that manager isn't there one day. If you've ever been in these types of situations, then you have been the victim of poor succession planning.

Succession planning is a proactive process of developing and training staff to meet the organization's current and future needs. An effective succession plan demonstrates the organization's commitment to staff members' growth by providing mentoring and training so that staff members are ready to move into a new position when it becomes available. It also benefits the organization because it creates a pool of well-prepared staff to fill key roles.

All organizations need succession planning, but many haven't developed any sort of plan. However, the lack of an organizational succession plan should not deter RT leaders from implementing a plan within their own department. Those who attend this presentation will be given key steps to start the succession planning process, and they will also receive a list of additional benefits that can be realized. You'll leave the lecture hall with a better understanding of how you can use succession planning to build your bench strength and ensure your department is well prepared for all contingencies. ■

Cheryl Hoerr is director of respiratory and sleep services at Phelps Regional Medical Center in Rolla, MO.

Mechanical Ventilation Strategies During ECMO

by Keith Lamb, RRT, RRT-ACCS, FAARC, FCCM

Extracorporeal membrane oxygenation (ECMO) has become a common option for the support of patients in either acute shock or profound respiratory failure. Patients in acute shock are at high risk for concomitant respiratory failure and acute respiratory distress syndrome (ARDS). Many large, academic, tertiary medical centers across the country offer ECMO or, alternatively, have the means to transfer these critically ill patients to another center with ECMO availability.

Invasive mechanical ventilation plays an important role in the treatment of any patient being supported with ECMO. Moreover, one of the primary purposes of cannulating the ARDS patient is to allow the clinician to employ less injurious ventilator settings while providing adequate ventilation and oxygenation with the ECMO circuit. It is now well described that energy, stress, and strain applied to the lungs may result in secondary inflammatory processes that increase the likelihood of death. The mainstay of modern ventilator management is to prevent iatrogenic injury by carefully applying lower tidal volumes and lower distending and transpulmonary pressures, and by using moderate to high levels of positive end-expiratory pressure to avoid the cyclic opening and closing of alveoli, known as atelectrauma.

The respiratory therapist plays a vital role in the management of patients on ECMO. Our unique and comprehensive understanding and knowledge of cardiopulmonary physiology make us the natural choice as vital members of the multidisciplinary critical care team responsible for taking care of these complicated patients. This presentation will describe the potential complications of mechanical ventilation and how ventilator management can be "dosed" with less injurious settings in the face of appropriate use of ECMO. ■

Keith Lamb is a respiratory therapist with the trauma, surgery, and neurological service and the respiratory therapy services at the University of Virginia Medical Center in Charlottesville.

Misdiagnosis of COPD

by Gail Drescher, MA, RRT, RRT-ACCS, CTTS

COPD is a frequent cause of hospitalization, with these patients representing one of the largest populations treated by respiratory therapists. However, some patients admitted with a past medical history or diagnosis of COPD do not have the disease. Correct identification is key to avoid improper treatment and associated health care costs. While some providers may view inhaled bronchodilators as having minimal risks regardless of clinical efficacy (Albuterol: The Cure All!), this therapy has potentially serious side effects. Misapplication of inhaled medications also adds to hospital and outpatient costs, and many patients are forced to choose which drugs they can afford to purchase each month. These treatments increase the workload of RTs as well, in an era where obtaining adequate staffing can be difficult.

In addition, financial penalties for all-cause, 30-day readmission following a COPD exacerbation continue secondary to the Hospital Readmissions Reduction Program (HRRP) of the Affordable Care Act. The value-based HRRP reduces payments to hospitals with excess readmissions for several ICD-10 discharge codes, including COPD with exacerbation (J44.1). Many health care systems are developing COPD navigator programs to deliver transition of care, with the goals being to reduce the readmission ratio and to provide patients with much-needed disease management skills. RTs are expanding their scope of practice to provide leadership and staffing in these settings. Knowledge to assist with targeting of limited resources to the appropriate patients can be useful in implementation.

So, although there are serious ramifications of COPD misdiagnosis, problems persist. For example, the Global Initiative for Chronic Obstructive Lung Disease (GOLD) provides diagnostic criteria for COPD, but not all patients receive appropriate workup. There are also issues with current spirometry benchmarks for diagnosis, with some professional organizations calling for changes to these standards. Further, there are common diseases that present with risk factors and symptoms similar to COPD, thus distinction can be difficult. RTs need to understand current guidelines and literature related to COPD, as well as the clinical nuances that assist with differential diagnosis. The objective of this presentation is to provide RTs with information regarding some of these issues, thus assisting the clinician in making more informed evaluations, treatment choices, and care plans. ■

Gail Drescher is a clinical specialist at MedStar Washington Hospital Center in Washington, DC.

RESPIRATORY CARE

OUR TEAM CARES

GENERATE AWARENESS

CELEBRATE RESPIRATORY CARE WEEK

OCTOBER 20-26, 2019

Now is the time to start planning for Respiratory Care Week and to be a leader for driving awareness. Join the nation's respiratory therapists in forming community events and recognition for our star performers in the respiratory profession!

Shop exclusive RC Week merchandise today!

https://www.jimcolemanstore.com/rcweek/

Let the Good Times Roll!

New Orleans offers a wealth of things to see and do during your downtime at the meeting — and you won't have to break the bank to enjoy them

When you arrive in New Orleans for AARC Congress 2019 this Nov. 9-12, you'll be coming to a city that's nearly 300 years old and home to a vibrant mix of cultures that collide in a brilliant explosion of sweet sounds, savory aromas, and Southern hospitality. Music rings through the air in this birthplace of jazz, and restaurants serving everything from world-class cuisine to $7 po' boys stand ready to please any palate.

It's all centered in the historic French Quarter — just steps away from the newly renovated Ernest N. Morial Convention Center where the meeting will take place. And the good news is, much of it is available to visitors free of charge. Aside from food and drink (and maybe a souvenir or two), you won't have to spend a penny to enjoy all that the Crescent City has to offer. Here are 25 totally free things to see and do in New Orleans —

1. Window shop your way through the stalls at the French Market to see local produce and specialty foods, along with crafts and handmade jewelry.

2. Take a tour of the Saint Louis Cathedral in Jackson Square. The historic church is breathtaking.

3. Wander along Woldenberg Riverfront Park from Canal Street to the Moon Walk in the French Quarter and watch ships of all kinds ply the Mighty Mississippi.

4. Stroll through Crescent Park just past the French Market at Elysian Fields for stellar city views.

5. Wander down Royal and Chartres streets to admire art, antiques, and oddities, then head over to Magazine Street to see its eclectic shops and cozy eateries.

6. Explore the history of New Orleans' Lower 9th Ward pre, during, and post Hurricane Katrina in the Lower 9th Ward Living Museum.

7. Walk around the Big Lake in City Park. Sit under century-old live oak trees and admire the Spanish Moss that hangs down.

8. Familiarize yourself with New Orleans history by reading the historic plaques on noteworthy buildings and public art all over the city.

9. Head to Second Vine Wine on Friday evening for free wine tastings from 6-8:30 p.m.

10. People watch along Jackson Square. You'll see mule-drawn buggies, artists selling their creations, and tarot card readers telling fortunes throughout the square.

11. Relax on the banks of Bayou St. John and watch canoes and other non-motorized water craft float along the bayou.

12. Wander through the Garden District to admire the beautiful mansions and their wrought iron fences and balconies.

13. Dance down Frenchmen Street any night of the week to hear music spilling out of the many clubs that rock till the wee hours.

14. Access the Historic New Orleans Collection to learn about the history of the Crescent City.

15. Free oysters and music can be found every Friday night at Le Bon Temps Roule on Magazine Street.

16. Visit the Sydney and Walda Besthoff Sculpture Garden to see 64 sculptures, a lagoon, Spanish Moss, and beautiful scenery.

17. Explore the above-ground cemeteries that are so famous in New Orleans, including St. Patrick Cemetery No. 2, Lafayette Cemetery No. 1, and St. Louis Cemetery No. 3. Don't miss the chapel in the back of St. Roch Cemetery.

18. Visit Milton H. Latter Memorial Library, located in a stately mansion on St. Charles Avenue that once belonged to silent film star Marguerite Clark.

19. Take in the art at one of the many art markets around town, such as the Frenchmen Art Garage on Frenchmen Street and the Art Garage on St. Claude Avenue.

20. Relax at The Fly, a swathe of green space behind the Audubon Zoo on the Mississippi River. Sunsets there are lovely.

21. Go upstairs at Arnaud's for a tour of Germaine Cazenave Wells Mardi Gras Museum, or check out the collections at Antoine's and Brennan's.

22. Enjoy live music at Music Legends Park on Bourbon Street, where you can take a selfie with Fats Domino, Pete Fountain, or Al Hirt while enjoying some of the daily free concerts.

23. Watch artists demonstrate glass blowing at Rosetree Blown Glass Studio, Studio Inferno, or New Orleans Glassworks. They all create beautiful pieces.

24. Meander around one of the city's many farmers markets, such as Crescent City Farmers Market and the Hollygrove Farmers Market, and take in a cooking demonstration or two.

25. Keep a good eye on the crowds on Bourbon Street. You never know what you might see!

Take in just some of these great sights and we guarantee you'll go home with so many Instagram-worthy photos you won't have time to share them all! For more on things to see and do in New Orleans, visit https://www.neworleans.com/. ■

World Health Organization Resolution Makes Patient Safety a Global Priority

by David Mayer, MD

"To err is human" — this old adage is as true today as it was in 1999, when a study by the Institute of Medicine, *To Err Is Human: Building a Safer Health System*, estimated that 98,000 hospital patients in the United States died from preventable medical errors. Today that estimate has grown to more than 250,000 preventable patient deaths, which makes medical error the third-leading cause of death in the United States. Globally, medical errors account for an estimated 4.8 million patient deaths from preventable causes.

In 2002, the World Health Assembly recognized patient safety as a critical component to delivering quality health care and encouraged members to "pay the closest possible attention to the problem of patient safety and the quality of care."

Making progress

While this situation may seem dire 20 years later, significant progress has been — and continues to be — made. Although errors are still a critical concern, we now know that many of those errors happen due to miscommunication, loss or lack of information at the right time, and system or process errors — all issues that can be remedied.

This analysis and understanding, coupled with the recently adopted World Health Organization (WHO) Global Action on Patient Safety, which places improving patient safety and the quality of care at the forefront of health care concerns, provides both the momentum and the means to eliminate preventable human deaths. This WHO resolution emphasizes the need for access to safe infrastructures, technologies, and medical devices by both patients and health care professionals. Most importantly, the resolution notes that a safe patient environment requires patients and clinicians to have open and transparent communication.

There also need to be a concerted effort to educate medical students, nursing students, health science and respiratory therapy students, and clinicians and staff on patient safety tools, techniques, and behaviors that have been shown to reduce risk. We must ensure that patient safety is a priority and an integral part of the organization's culture.

Roadmap

While patient harm is no longer thought of as inevitable, there is still a lot of work to be done to eliminate preventable events. Not long after the *To Err Is Human* report, the U.S. Congress passed legislation that requires the Agency for Healthcare Research and Quality (AHRQ) to monitor progress made in improving care and to provide annual reports on the data. AHRQ has also developed Patient Safety Indicators that hospitals can use to identify areas in which they can improve safety. The most recent version of its National Scorecard on Hospital-Acquired Conditions showed a 13 percent drop in these conditions from 2014 to 2017, which resulted in an estimated 20,500 lives saved.

Going forward, the WHO Global Action on Patient Safety provides some important guidance to improving the delivery of health care to patients. The resolution encourages members to:

- Recognize patient safety as a health priority in policies and programs, making safety an essential component of healthcare systems;
- Assess and measure the nature and magnitude of risks, errors, adverse events and patient harm at all levels of health service delivery, including reporting, learning and feedback systems;
- Incorporate the perspectives of patients and their families;
- Take preventative action and implement systems to reduce risk;
- Develop and implement national policies, legislation, strategies, guidance and tools;
- Deploy adequate resources to ensure the safety of health services;
- Work collaboratively with other member states and stakeholders to promote, prioritize, and embed patient safety into policies and strategies;
- Share and disseminate best practices and encourage mutual learning to reduce patient harm;

Integrate and implement patient-safety strategies in all clinical programs to prevent patient harm and to minimize the risk of inaccurate or late diagnosis and treatment;

- Pay special attention to at-risk groups;
- Promote a culture of safety by providing training to all health care professionals;

- Develop a blame-free patient-safety incident-reporting culture and process using open and transparent systems;
- Promote the use of new technologies to support data collection for surveillance and risk reporting while ensuring patient privacy, and use the data to support and develop improved systems and processes; and
- Put systems in place to engage and empower patients, families, and communities in the delivery of safer health care and to use their experiences to develop strategies to minimize harm.

This guidance and the adoption of an annual World Patient Safety Day, September 17, provides a roadmap and a reinvigoration of the movement to avoid preventable patient death.

Where do we begin?

The lack of a safety culture plagues many health care organizations and is typically an underlying factor that prevents them from addressing issues that lead to patient harm. Thus, making patient safety a priority in your organization's culture — and sustaining it — is job one. But just what is it?

First of all, changing a culture is not easy. It requires a commitment from both leadership and staff, and it must be driven by respect and common goals among all parties: doctors, nurses, staff, patients, and families. This respect is essential for effective communication, collaboration, team building, decision-making, and the implementation of systems and processes that ensure patient safety. One of the first requirements is to establish trust in leadership and across the organization. This trust encourages open and timely reporting of issues and rapid responses to addressing concerns, and drives effective communication of improvements to staff, who can then be held accountable for adhering to established safety protocols.

Another necessary element of this shift in culture is embracing open and honest communication and transparency in the flow of information between all parties, as well as fairness in holding individuals accountable for decisions and for adherence to established safety protocols.

Finally, your safety culture must measure progress and strive to continuously improve the safety culture, as well as the processes necessary to eliminate preventable harm to patients.

Tools

There are several communication tools available to help you create a culture of safety. The Patient Safety Movement Foundation's Actionable Patient Safety Solutions (APSSs), a set of evidence-based solutions designed to reduce preventable deaths, emphasizes Culture of Safety as a first priority. This solution includes a set of checklists to encourage accountability, ensure transparency, and create the infrastructure needed to make changes. APPSs are offered free of charge.

Similarly, the AHRQ offers the Communication and Optimal Resolution (CANDOR) online toolkit at no charge. CANDOR focuses on these same key characteristics and actions of a safety culture.

Hospitals that have implemented CANDOR have experienced improved safety outcomes, improved patient satisfaction scores, and a reduction in liability claims. Results include:

- 40 percent reduction in preventable harm;
- 40 percent fewer malpractice claims;
- 50 percent decrease in self-insured fund set-aside;
- 80 percent reduction in the time to settle cases; and
- 40 percent reduction in services associated with defensive medicine.

At MedStar Health, we developed and use a CANDOR-like approach to preventable medical harm and have seen our rate of serious safety events cut in half. Addressing unintentional adverse events quickly and transparently is critical to our ability to learn and improve our systems and processes. It is not only the right thing to do, it is also the smart thing to do. ■

About the Author…

David Mayer, MD, is the CEO of the Patient Safety Movement Foundation and is also the executive director of the MedStar Institute for Quality & Safety.

AARC Congress 2019

The 65th International Respiratory Convention & Exhibition

Advance Program

Ernest N. Morial Convention Center • New Orleans, LA
November 9–12, 2019 (Sat–Tue) • AARC.org

Welcome To AARC Congress 2019

Where RTs Are the Main Act

From the welcome you receive when you walk into the convention center to the cheers and applause you hear as you leave the Closing Ceremony, you'll be the star attraction at AARC Congress 2019.

This premier meeting of the year in the respiratory care profession is designed by RTs, for RTs, and whether you are a manager or educator or bedside therapist you'll find educational sessions targeting your specific area of practice. Cutting edge ventilator modes will be explained. New regulations coming out of Washington, DC, will be clarified. And forward-looking opportunities like telehealth will be addressed.

The Exhibit Hall promises to deliver the latest technology in the field as well, and you'll find networking opportunities around every corner, in fun and entertaining social settings and informal get-togethers alike.

It's all geared to helping you provide the best possible care to people suffering from lung disease, because for those people, quality care depends on the skills and expertise of the RT. Think of it as a spa treatment for your career. You'll go home rejuvenated and ready to redouble your efforts on behalf of your organizations and your patients.

Unless specified differently, all Congress events will be held at the Ernest N. Morial Convention Center.

The 65th International Respiratory Convention & Exhibition

On behalf of AARC President Karen Schell and the Board of Directors, we invite you to attend the largest respiratory care meeting in the world. At AARC Congress 2019 in New Orleans, the AARC Specialty Sections and the Program Committee have developed a curriculum that will offer more of everything that matters to you and your patients. You may attend other educational meetings, but none of them offer you all of the following…

- The latest information on Value Based Purchasing and its impact on hospitals, patients and the respiratory therapist.
- The AARC Exhibit Hall where you can learn, see and touch the latest advancements in technology showcasing all manufacturers in the industry… more than 200 exhibitors in total and 8 hours of unopposed exhibit time.
- The result of original research presented by your peers in 14 Open Forums over the 3½ days.
- All the continuing education credit (CRCE) you need to maintain your state license.
- Programs in all areas of respiratory care: adult critical care, neonatal and pediatric care, post-acute care, diagnostics, transport, management, education, and sleep, all presenting the most current and cutting-edge information.

Read through this program and very rapidly you will realize why you must come to New Orleans and be part of the largest and most comprehensive respiratory care meeting anywhere in the world… AARC Congress 2019.

See you there!

300+ original research projects

140+ speakers

200+ sessions on current respiratory care topics

3½ days of networking and education

3 days of exhibits with all companies in the industry

20+ CRCE credits

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

PROGRAM COMMITTEE

Sarah L Varekojis PhD RRT FAARC— *Chair*
Kim Bennion RRT MSHS CHC
Dana Evans MHA RRT RRT-NPS
Thomas Lamphere BS RRT-ACCS RPFT FAARC
Brady Scott MS RRT FAARC
Kimberly Wiles RRT CPFT
Richard Branson MSc RRT FAARC — *Consultant*
Douglas Laher MBA RRT FAARC — *Staff Liaison*

Pre-Courses

The Burden of Asthma and Emerging Therapies

1:00 PM – 5:00 PM

DESCRIPTION: According to the CDC, asthma control in the United States is lacking. This symposium will discuss the socioeconomic burden of asthma in the U.S. and the burden it places on our health care system. Attendees will learn to sharpen their assessment skills and better understand the role of phenotyping as a diagnostic tool. Course faculty will also discuss management strategies of asthma to include pharmacologic management and the role of biologics.

Course capacity is limited. Deadline for registration is Wednesday, October 16, 2019 or when the course is full. This course can be applied toward continuing education credits (CRCE). You must attend the entire course to receive CRCE credit; no partial credit will be awarded.

Content Category: PFT

The Burden of Asthma

1:00 PM - 1:55 PM

Kathleen Ververeli MD, Allentown PA

As reported by the CDC, asthma control in the United States is lacking. This presentation will discuss the socioeconomic burden of asthma in the US as well as the stressors on the health care system.

Update on Assessment and Diagnosis of Asthma

2:00 PM - 2:40 PM

Maeve O'Connor MD FACP, Charlotte NC

Accurate patient assessment is vital to determining an appropriate diagnosis of asthma. Those in attendance will enhance their assessment skills and be educated on updates from national organizations on the assessment of the asthmatic patient.

Pharmacologic Management for Asthma

2:45 PM - 3:25 PM

Douglas Gardenhire EdD RRT FAARC, Atlanta GA

To properly care for the patient with asthma, clinicians should be able to select the most appropriate medication and delivery device. This presentation will focus on the pharmacologic management of the patient with asthma.

Phenotyping for Asthma

3:35 PM - 4:15 PM

Maeve O'Connor MD FACP

The GINA guidelines suggest that patients with severe asthma may benefit from phenotyping. This presentation will define phenotyping and how this testing method can assist in the development of a treatment plan for severe asthma.

The Role of Biologics in the Treatment of Asthma

4:20 PM - 5:00 PM

Kathleen Ververeli MD

Not all patients with asthma respond to standard pharmacologic intervention. The evidence suggests that biologic agents may promote positive outcomes in these situations and increase quality of life.

Kathleen Ververeli

Douglas Gardenhire

Women in Leadership: Moving Forward

1:00 PM – 5:00 PM

DESCRIPTION: Recent studies show that women remain significantly underrepresented among senior leadership despite the perception of progress. There are many assertions made to account for this gap but examining our own biases and stereotypes can help illuminate some of the existing challenges. Women possess many desirable leadership qualities, including building relationships, inspiring and motivating others, and practicing self-development.

This symposium will focus on leveraging these qualities for success through sessions that address re-framing challenges women encounter as they aspire to leadership roles, ensuring readiness and success with career transitions, and leveraging teams for success. This pre-course is designed for both women and men and for both emerging and current leaders.

Course capacity is limited. Deadline for registration is Wednesday, October 16, 2019 or when the course is full. This course can be applied toward continuing education credits (CRCE). You must attend the entire course to receive CRCE credit; no partial credit will be awarded

Content Category: EDU

Introduction

1:00 PM - 1:15 PM

Sarah Varekojis PhD RRT FAARC, Westerville OH

Recent studies show that women remain significantly underrepresented among senior management despite the perception of progress. This symposium will focus on key areas that will impact your career.

Reframing Career Challenges

1:15 PM - 2:10 PM

Lori Tinkler MBA, Overland Park KS

Just as strategic planning is an ongoing part of business development it should also be an ongoing part of your career development. The presenter will discuss the challenges faced when we try to change course or adjust our career trajectory. Learn ways to step back and change your view.

Positioning for Career Transitions

2:20 PM - 3:15 PM

Shelley Mishoe PhD RRT FAARC, Virginia Beach VA

Part of working with others is developing a knowledge of people's strengths and weaknesses. We know who can get a job done. Breaking out of those perceptions is essential when you want to position yourself for promotion. The presenter will discuss how to set the stage for your next career transition.

Leveraging Teams for Success

3:25 PM - 4:20 PM

Valerie David MPA RRT AE-C, Smyrna GA

It's been said before for many things, "it takes a village." Our careers are no different. Working in teams can benefit the company, group, and the individual members. Learn how to leverage your teams for success in this presentation.

Panel Discussion

4:25 PM - 5:00 PM

Our three speakers sit down to discuss their lessons learned and dig deeper into hot topics from the day.

Sarah Varekojis

Lori Tinkler MBA

Shelley Mishoe

Valerie David

Saturday

Awards Ceremony
8:00 AM - 9:30 AM

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

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

Keynote Address
It's COPD - Dammit!
9:35 AM - 10:25 AM

Ted Koppel, Award Winning Broadcast Journalist

Opening of the Exhibit Hall
10:30 AM

Karen Schell DHSc RRT RRT-NPS RPFT
AARC President/*Presiding*

The 2019 AARC President opens the Exhibit Hall. As the gold standard of all respiratory care meetings, AARC Congress 2019 presents to you all the manufacturers and suppliers in the industry. The Exhibit Hall offers attendees an opportunity to see, touch, and manipulate the latest technology in the field and have clinical conversations with manufacturer representatives. Don't miss this great opportunity!

Thomas Kallstrom

Ted Koppel

Karen Schell

Sputum Bowl Preliminaries

Supported by

Medtronic
Further, Together

8:00 AM - 6:00 PM

Thomas Lamphere RRT RPFT FAARC/ *Presiding*

Student teams from the AARC State Societies compete in the preliminary competitions. The top four teams will face off in the Finals on Monday, November 11th.

Presenting an Open Forum Abstract

11:00 AM - 12:00 PM

Richard Branson MS RRT FAARC, Beaufort SC

Teresa Volsko MBA RRT FAARC, Canfield OH

This presentation will introduce the neophyte research presenter to the customs, roles, and experience of presenting at an Open Forum session. The stages of an Open Forum presentation including poster set-up, interacting with participants and moderators, presenting at the podium, and participating in moderated audience discussions will be addressed. Expectations for Editors' Choice and Poster Only presentations will be reviewed.

Orientation for 1st Time Attendees

11:00 AM - 12:00 PM

Karen Schell DHSc RRT RRT-NPS RPFT, Frankfort KS

Sarah Varekojis PhD RRT FAARC, Westerville OH

This lecture will provide tips from previous Congress attendees to help make the most of this year's meeting including lessons learned, prioritizing lectures, and take-home highlights.

Open Forum® – Poster Discussions #1

Supported by an unrestricted educational grant from

monaghan

3:15 PM - 5:10 PM

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

Richard Branson

Teresa Volsko

Karen Schell

Sarah Varekojis

RESPIRATORY CARE

Open Forum® Symposia
sponsored by

monaghan

Clinicians present the results of their scientific studies. Abstracts with a similar focus are clustered into a symposium to encourage discussions and interactions among investigators and observers; posters expand the information presented. 14 Open Forum Symposia will be presented during the 3 ½ days of AARC Congress 2019.

Open Forum® – Poster Discussions #2

Supported by an unrestricted educational grant from

monaghan

3:15 PM - 5:10 PM

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

(Symposium) Case Studies in Ethics

1:30 PM – 4:05 PM

▶Who Gets to Decide? Case Studies in Autonomy

1:30 PM - 2:05 PM

Melissa Ash RRT RRT-ACCS AE-C, Downingtown PA

Content Category: ETH

In the US, ethical decision-making is typically based on ethical principles: autonomy, beneficence, non-maleficence, and justice. This presentation will showcase the principle of autonomy as the presenter explores how autonomy can be upheld and violated in various case studies.

Content Categories

AAC — Adult Acute Care
CLP — Clinical Practice
EDU — Education
ETH — Ethics
MGT — Management
NPS — Neonatal/Pediatrics
PFT — Pulmonary Function
PTS — Patient Safety
SDS — Sleep Medicine

▶Define "Good": Case Studies in Beneficence

2:10 PM - 2:45 PM

Shawna Strickland PhD RRT FAARC, Irving TX

Content Category: ETH

In the US, ethical decision-making is typically based on ethical principles: autonomy, beneficence, non-maleficence, and justice. This presentation will showcase the principle of beneficence as the presenter explores the definition of "good" and how this principle emerges in various case studies.

▶But First...Do No Harm: Case Studies in Non-Maleficence

2:50 PM - 3:25 PM

Stephanie Williams BS RRT, Nashville TN

Content Category: ETH

In the US, ethical decision-making is typically based on ethical principles: autonomy, beneficence, non-maleficence, and justice. This presentation will showcase the principle of non-maleficence as the presenter explores how non-maleficence is a complex component through various case studies.

▶Fair Play: Case Studies in Justice

3:30 PM - 4:05 PM

Joel Brown BS RRT FAARC, Oxford PA

Content Category: ETH

In the US, ethical decision-making is typically based on ethical principles: autonomy, beneficence, non-maleficence, and justice. This presentation will showcase the principle of justice as the presenter explores how justice manifests and can be difficult to manage in various case studies.


Melissa Ash


Shawna Strickland


Stephanie Williams


Joel Brown

(Symposium)
Patient Assessment
1:30 PM – 4:05 PM

▶ECG Interpretation: Rhythm Strips
1:30 PM - 2:05 PM

Kyle Mahan MSM RRT, Louisville KY

Content Category: CLP
This lecture will review concepts related to basic ECG rhythm strips respiratory therapists encounter in the acute care environment. Special emphasis will be placed on components of the ECG tracing, systematic rhythm strip interpretation, and recognition of various ECG normal and abnormal findings.

▶ECG Interpretation: 12-Leads
2:10 PM - 2:45 PM

Sara Mirza MD MS, Chicago IL

Content Category: CLP
This lecture will provide an overview of the 12 lead ECG and its usefulness in diagnosing pathologic conditions in the acute care environment. Emphasis will be placed on the systematic interpretation of 12 lead ECG's and recognition of normal and abnormal conditions.

▶Hemodynamic Monitoring in Adult Acute Care: A Case-Based Review
2:50 PM - 3:25 PM

David Vines RN RRT FAACP, Winfield IL

Content Category: CLP
Hemodynamic instability is common in the intensive care environment. This lecture will use clinical cases to discuss various hemodynamic parameters and how they might impact clinical decision making.

▶Essential Skills for Rapid Response Assessment
3:30 PM - 4:05 PM

Eric Kriner BHS RRT, Washington DC

Content Category: CLP
Respiratory therapists are integral parts of rapid response teams. This lecture will review essential skills that respiratory therapists need to have when faced with patients that are acutely ill. Emphasis will be on rapid assessment and interpretation of unstable vital signs, acute mental status changes, and the potential for airway compromise.

(Symposium)
Preventing Readmissions with NIV
1:30 PM – 2:45 PM

▶Preventing Readmissions with NIV
1:30 PM - 2:05 PM

Kimberly Wiles BS RRT FAARC, Kittanning PA

Content Category: CLP
Frequent hospital readmissions for exacerbation of COPD with hypercapnic respiratory failure. This lecture will discuss methods to identify appropriate patients and improve patient compliance with NIV in the home.

▶The Future of Noninvasive Positive Pressure Ventilation in the Home
2:10 PM - 2:45 PM

Zach Gantt RRT, Livingston TN

Content Category: CLP
Noninvasive Positive Pressure Ventilation (NPPV) in the home has proven to be a roller coaster of success, failures, audits, and outcomes over the last 20 years. This presentation will outline how data has progressed this service and what data is needed to continue to prove the viability of NPPV, both from a device and respiratory service perspective.


Kyle Mahan


Sara Mirza


David Vines


Eric Kriner


Kimberly Wiles


Zach Gantt

Experience: Revisiting Patient Perspective

1:30 PM - 2:05 PM

Tim Gilmore PhD RRT AE-C, Shreveport LA

Content Category: CLP

This presentation will remind caregivers of clinical and other implications of common practice interventions. It will bring research-based evidence as well as thought-provoking anecdotal reminders to light that encompass the long-term effects beyond simple HCAHPS scores. The real-time and long-term clinical implications of certain procedures and/or interventions of certain common bedside practices will also be discussed.

That's Not the Way We Do It Here – How to Standardize Competencies within a Hospital System

1:30 PM - 2:05 PM

Matthew Jurecki BS RRT, Lakewood OH

Content Category: EDU

In recent years, independent hospitals have been absorbed into larger hospital systems. Respiratory therapists often float between hospitals within the same health system and this can be a cause for concern related to competencies. This presentation will discuss how to standardize competencies within a health system.

A Better Bronchoprovocation Test: Why Utilizing A Resistance Parameter Makes Sense!

1:30 PM - 2:05 PM

Matthew O'Brien RRT RPFT FAARC, Madison WI

Content Category: PFT

Bronchoprovocation testing, whether indirect or direct, can benefit from the addition of the measure of airway or respiratory system resistance. This presentation outlines how to easily integrate body plethysmography or oscillometric methods into your bronchoprovocation test.

Respiratory Unknowns: A Case-Based Presentation

1:30 PM - 2:05 PM

Bruce Rubin MBA MD MHA, Henrico VA

Content Category: NPS

How good are your diagnostic skills? A master clinician will present a series of interesting "unknowns" in pediatric respiratory care. Can you make the diagnosis? Attend this session to test your knowledge. Time will be allocated for discussion with the audience.

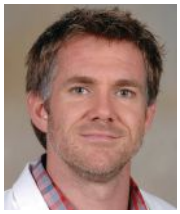
How Do Your Leadership Skills Measure Up?

1:30 PM - 2:05 PM

Teresa Volsko MBA RRT FAARC, Canfield OH

Content Category: MGT

Leadership is an elusive concept with vague and ambiguous rules. This presentation will focus on the art and science of leadership. Discover insights into better practices to produce movement and constructive or adaptive change by establishing direction through visioning, aligning people, motivating, and inspiring.


Tim Gilmore


Matthew Jurecki


Matthew O'Brien


Bruce Rubin


Teresa Volsko

(Symposium)
Cardiopulmonary Exercise Testing
2:10 PM – 4:45 PM

▶Indications & Physiologic Response to Cardiopulmonary Exercise Testing
2:10 PM - 2:45 PM

Kaiser Lim MD, Rochester NY

Content Category: PFT
Cardiopulmonary exercise testing (CPET) is used to evaluate complaints of reduced exercise tolerance in subjects secondary to an unknown origin. We will describe the clinical utilization of CPET and overall testing process. The presenter will also discuss the normal cardiac and ventilatory responses to an incremental exercise test.

▶The Role of Exercise Testing in Improving Rehabilitation Outcomes
2:50 PM - 3:25 PM

William Stringer MD, Torrance CA

Content Category: PFT
Pulmonary rehabilitation outcome measurements are needed to demonstrate program benefit and support program utilization. This lecture will discuss the utility of cardiopulmonary exercise testing in tailoring the exercise program and assessing outcomes.

▶VO2 Testing or Six-Minute Walk: Which One Is Best?
3:30 PM - 4:05 PM

Kaiser Lim MD

William Stringer MD

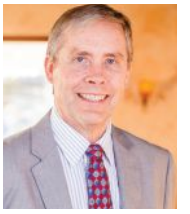
Content Category: PFT
Cardiopulmonary exercise testing (CPET) is the gold standard in identifying a specific limitation or change in exercise tolerance. The six-minute walk test has increasingly been used to define exercise tolerance and follow exercise outcomes in patients with chronic disease. This pro/con will describe the role of each procedure and debate which is more appropriate to assess a specific clinical outcome.

▶Quality Assurance in the Exercise Lab
4:10 PM - 4:45 PM

Katrina Hynes MHA RRT RPFT, Rochester MN

Content Category: PFT
Cardiopulmonary exercise testing (CPET) uses a variety of sophisticated equipment integrated with computer software to calculate minute ventilation, oxygen consumption, and a plethora of derived values. As they say, "garbage in, garbage out." This lecture will describe the use of BioQC for CPET and their statistical targets.


Kaiser Lim


William Stringer


Katrina Hynes

Exhibit Hall Hours:

Saturday, Nov. 9, 10:30 am – 4:00 pm
Sunday, Nov. 10, 9:30 am – 3:00 pm
Monday, Nov. 11, 9:30 am – 2:00 pm

Year in Review

2:10 pm – 5:25 pm

Asthma
2:10 PM - 2:45 PM

Michael Davis RRT, Richmond VA

Content Category: CLP
This lecturer will describe the best papers published in 2019 related to asthma.

High Flow Nasal Oxygen in Adults
2:50 PM - 3:25 PM

Jie Li MSc RRT, Forest Park IL

Content Category: AAC
This lecturer will describe the best papers published in 2019 related high flow nasal cannula.

Secretion Clearance in Ventilated Patients
3:30 PM - 4:05 PM

Richard Branson MS RRT FAARC, Beaufort SC

Content Category: AAC
This lecturer will describe the best papers published in 2019 related to secretion clearance in mechanically ventilated patients.

Patient Ventilator Synchrony
4:10 PM - 4:45 PM

Robert Chatburn RRT RRT-NPS MHHS, Cleveland OH

Content Category: AAC
This lecturer will describe the best papers published in 2019 related to ventilator synchrony.

Aerosol Therapy
4:50 PM - 5:25 PM

Ariel Berlinski MD FAARC, Little Rock AK

Content Category: CLP
This lecturer will describe the best papers published in 2019 related to aerosol therapy.

AARC CONGRESS 2019
The 65th International Respiratory Convention & Exhibition


Michael Davis


Jie Li


Richard Branson


Robert Chatburn


Ariel Berlinski

Pulmonary Rehabilitation: The Respiratory Residency – Do You Have One?

2:10 PM - 2:45 PM

Shawna Murray MHS RRT CHC, Salt Lake City UT

Content Category: EDU

A residency for new graduates can support them as they transition from student to professional while on-boarding to facility-specific equipment and processes. Evidence shows that new graduates to the health care profession need a framework to help them get their feet beneath them while running to keep up with the pace of change and the challenges of the industry. Innovations to material presentation allows the new employees to grow and learn while making important connections and friendships.

Shared Governance: Stop Telling Your Team and Start Asking

2:10 PM - 2:45 PM

Matthew Pavlichko MS RRT RRT-NPS, Myerstown PA

Content Category: MGT

Employee engagement is becoming a priority metric in the hospital/health care industry. The Shared Governance theory is a way to engage and develop health care employees. This presentation describes the history, purpose, and structure of shared governance as well as how it can improve employee engagement while driving quality and process improvement.

Mechanical Ventilation of Pediatric Patients with Acute Brain Injury

2:10 PM - 2:45 PM

Jordan Rettig MD, Boston MA

Content Category: NPS

Many factors must be taken into consideration when ventilating a pediatric patient with acute brain injury. The presenter will discuss neurological breathing patterns, cerebral blood flow, and the impact of brain injury on the lung

(Symposium) ALS Updates: What's New, What's Going Well, What's on the Horizon?

2:50 PM – 4:45 PM

▶ALS Multidisciplinary Clinics - A Model That's Making a Difference

2:50 PM - 3:25 PM

Cynthia Knoche RRT BBA, Ponte Vedra Beach FL

Content Category: CLP

While amyotrophic lateral sclerosis (ALS) remains a fatal disease with no identified cure, studies show that attending an ALS multidisciplinary clinic prolongs survival. Collaboration with multidisciplinary team members maximizes care options and supports patients' desired quality of life outcomes. ALS patients rely on the expertise of both the clinic and home care therapist to evaluate, recommend, and manage their complex and ever-changing ventilation requirements.

▶ALS: Identifying Successful Respiratory Interventions

3:30 PM - 4:05 PM

Stephen Kantrow MD, New Orleans LA

Content Category: CLP

The five years since the Ice Bucket Challenge have brought advances in research, clinical trials, and new medications, yet ALS patients continue to face their most challenging issue – respiratory failure. This lecture will review ALS pathology and discuss successful


Shawna Murray


Matthew Pavlichko


Jordan Rettig


Cynthia Knoche

respiratory interventions that support prolonged survival and quality of life.

▶Multidisciplinary Team Approach for ALS Patients in the Home

4:10 PM - 4:45 PM

Brian Timon BS RRT, Austin TX

Content Category: CLP

ALS is a progressive disease that requires a multi-disciplinary team to develop and implement individualized care plans. The RT is a key member of this team and must be able to recognize challenges inherent with ALS and be competent in patient assessment and treatment modalities.

Inhaled Medications in Cystic Fibrosis

2:50 PM - 3:25 PM

Ariel Berlinski MD FAARC, Little Rock AK

Content Category: NPS

Inhaled medications are widely used in the care of patients with Cystic Fibrosis. The speaker will discuss the available evidence for the use of different inhaled medications in the treatment of Cystic Fibrosis.

Person First, Patient Last: Equity vs. Equality in Patient Education

2:50 PM - 3:25 PM

Gabrielle Davis MPH RRT CHES, Boise ID

Content Category: EDU

Appropriate patient education is imperative during appointments and hospital stays to ensure patients are armed with the necessary tools to be successful once they return home. Unfortunately, all people learn differently and literacy levels vary across the nation. Therefore, RTs must personalize general educational information that would best fit each patient instead of using materials and techniques that simply cater to their diagnosis.

Using the Concept of "Compressed Time" to Close the Execution Gap with Goal Setting

2:50 PM - 3:25 PM

Scott Reistad RRT CPFT FAACP, Colorado Springs CO

Content Category: MGT

The farther down the road plans for the future are made, the less predictability exists. With long-term plans, calculated "guesses" are made about future performance based on assumptions regarding today & yesterday. The reality is that it's very difficult, if not impossible, to determine what your daily actions should be only 6 months or 1 year from now. Using a model of "compressed time," this problem may lend to more predictive success in achieving the goals you desire.

Open Forum® – Poster Discussions #3

Supported by an unrestricted educational grant from

monaghan

3:15 PM - 5:10 PM

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

Brian Timon

Ariel Berlinski

Gabrielle Davis

Scott Reistad

Open Forum® – Poster Discussions #4

Supported by an unrestricted educational grant from

monaghan

3:15 PM - 5:10 PM

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

BPD Outcomes: Are We Making Any Progress?

3:30 PM - 4:05 PM

Ilana Heisler MS RRT, Boston MA

Content Category: NPS

Neonatal Care is constantly evolving based upon new evidence. Much work has been done to reduce the rate and impact of BPD. This presentation will review current strategies to prevent BPD and discuss the impact this has made on patient outcomes.

How to Implement a Respiratory-Driven Vascular Access Program

3:30 PM - 4:05 PM

Stacey Cutts BHS RRT, Rowlett TX

Content Category: MGT

"Turf wars" can arise when traditional services provided by one discipline are encroached upon by another. The presenter will share tips on creating and implementing a respiratory care-driven vascular access program. Preliminary data demonstrating the need and steps for assuming vascular access team duties at your facility will be shared.

Being an Effective Preceptor: How and Why?

3:30 PM - 4:05 PM

Emilee Lamorena MSc RRT RRT-NPS, Chicago IL

Content Category: EDU

Being a preceptor is one of the most difficult, yet most important, parts about being an RT. As a preceptor, you have a direct impact on the future of our profession and the clinicians who become the face of respiratory care. To be an effective preceptor, you must not only translate didactic knowledge into bedside skills, but also inspire and cultivate a passion for respiratory care. This presentation will cover the hot tips and best practices that all preceptors should know!

Compliance, Resistance, and Time Constants – Oh My!

4:10 PM - 4:45 PM

Jeff Anderson MA RRT, Boise ID

Content Category: AAC

This presentation will provide attendees with in-depth understanding of how the time constant influences ventilation, particularly in terms of its influence on auto-PEEP, both in mechanically ventilated patients and spontaneously breathing patients with COPD.

Pediatric Respiratory Care Residency Program

4:10 PM - 4:45 PM

Heather McKelvy MHA RRT RRT-NPS, Menlo Park CA

Content Category: NPS

Many children's hospitals are evaluating the most efficient means to train new graduates. This presentation will discuss the value in developing a Pediatric Respiratory Care residency program. Program restructuring, barriers, and successes encountered will be discussed.


Stacey Cutts


Emilee Lamorena


Jeff Anderson


Heather McKelvy

Leading Outside of the Box
4:10 PM - 4:45 PM

Kevin McQueen MPA RRT RRT-ACCS, Colorado Springs CO

Content Category: MGT

Demand for respiratory care leadership is growing. Respiratory therapists and leaders are being asked to expand their roles. Join the presenter as he discusses the challenges of managing departments outside of the normal progression in respiratory care. Examples will include managing the emergency department, risk management, and patient safety management, as well as, safety/security and environment of care.

Organizing to Learn and Participate in Successful Teaming: Are You Ready?
4:10 PM - 4:45 PM

Shawna Murray MHS RRT CHC, Salt Lake City UT

Content Category: EDU

Successful interdisciplinary teaming requires a learning organization to operate in an environment of psychological safety where all participants of the team feel comfortable and confident in sharing what they know with others. Respiratory therapists using their unique assessment skills can and should be some of the most valuable members of the team. When health systems are organized to learn from every patient interaction and encounter and are empowered to share that knowledge, we all win!

The Battle Against Influenza
4:10 PM - 4:45 PM

William Pruitt RRT AE-C FAARC, Mobile AL

Content Category: CLP

Each year influenza affects millions of patients and for children and those with pulmonary disease the "flu" causes many hospitalizations and deaths. There is a potential for a major world-wide disaster if deadly strains develop and spread. Annual vaccination, patient education, precautions to avoid infection, and provision of quality, appropriate care can help reduce the impact on health, improve survival, and reduce cost.

Going Beyond Disease Management: Creating Population Health
4:50 PM - 5:25 PM

Bill Galvin MSEd RRT FAARC, Havertown PA

Content Category: CLP

Ok, we all know that a healthy population makes good sense. We also know that disease management and all its principles/practices are sound strategies. But, considering our desire to practice healthy behaviors/disease prevention, so called "good medicine," what are the forces shaping health care drivers of poor health, and quality health and longevity? Attend this session and learn lessons from "Blue Zones" about the drivers of disease and key ingredients to longevity and an improved quality of life.


Kevin McQueen


Shawna Murray


William Pruitt


Bill Galvin

Continuing Respiratory Care Education (CRCE)

AARC Congress 2019 is approved for all the credit hours you need to maintain your state license, more than 20 hours.

Update on APRT
4:50 PM - 5:25 PM

Brian Walsh PhD RRT RRT-NPS, Lynchburg VA
Robert Joyner PhD RRT FAARC, Delmar MD

Content Category: EDU
This session is an update for the profession on the progress made by the APRT committee.

High Frequency Percussive Ventilation: Does It Have a Role in Pediatric Critical Care?
4:50 PM - 5:25 PM

Emilee Lamorena MSc RRT RRT-NPS, Chicago, IL

Content Category: NPS
High frequency percussive ventilation (HFPV) has been proposed as an alternative mode of ventilation for patients with acute respiratory distress syndrome and acute lung injury. This presentation will review the theory and mechanisms behind HFPV, the evidence surrounding its use on patients in refractory hypoxemic failure, and provide recommendations for future use in pediatric critical care.

Ventilator-Induced Lung Injury
4:50 PM - 5:25 PM

Neil MacIntyre MD FAARC, Durham NC

Content Category: AAC
Ventilator-induced lung injury (VILI) is associated with significant morbidity and mortality. This lecture will include an overview of the mechanism, incidence, and strategies used to reduce VILI.

Considerations when Transitioning a Ventilator Dependent Patient from a Hospital Ventilator to a Home Ventilator
4:50 PM - 5:25 PM

Anthony Mozzone BHS CRT CRT-NPS

Content Category: CLP
Chronic care management of the ventilator dependent patient in the home requires an understanding of the equipment available. There are pros and cons to each unit, and it is the RTs expertise that helps to determine the most appropriate device.

Exhaled Breath Hydrogen Testing: Diagnostics to Expand Your Pulmonary Lab
4:50 PM - 5:25 PM

Matthew O'Brien RRT RPFT FAARC, Madison WI

Content Category: PFT
Breath testing allows clinicians to evaluate biomarkers for a variety of conditions. Exhaled breath hydrogen testing is used to evaluate malabsorption of various sugars, assisting GI clinicians in a thorough clinical assessment. Learn more about how breath hydrogen testing might be an asset to your pulmonary lab.

Drowning in Readmits? Respiratory Navigation: A Breath of Fresh Air
4:50 PM - 5:25 PM

Consuela Wiley RRT, Pamplin VA

Content Category: MGT
The implementation of the Medicare Hospital Readmission Reduction program led to increased focus on quality care. Hospitals not meeting 30-day hospital readmission expectations were penalized. After incurring a $2.7 million penalty in fiscal year 2016, four hospitals utilized pulmonary disease navigation to decrease that penalty to $941,888 in fiscal year 2018. Follow the presenter as she provides the "how to" for penalty avoidance using pulmonary disease navigators.


Brian Walsh


Robert Joyner


Emilee Lamorena


Neil MacIntyre


Anthony Mozzone


Matthew O'Brien


Consuela Wiley

AARC Awards Ceremony

Saturday, November 9
8:00 am – 9:30 am

Keynote Address

Saturday, November 9
9:35 am – 10:25 am

AARC Welcome Party

Saturday, November 9
8 pm

Flag Folding Ceremony

Monday, November 11
8:50 am – 9:20 am

42nd Annual Sputum Bowl Finals & Reception

Monday, November 11
Finals: 5:30pm - 7:30pm

Sponsored by

Medtronic
Further, Together

Closing Ceremony

Tuesday, November 12
12:45 pm – 2:15 pm

Facts Matter

Monaghan Fact Check

At Monaghan Medical Corporation, we take pride in using recognized standards and other innovative techniques to thoroughly evaluate our products because we recognize device quality matters to you and your patient.

When considering a respiratory device, learn the facts and look for these assuring quality indicators:

- Positive Patient Outcomes
- Peer-Reviewed Research and Studies
- Clinically and Scientifically Relevant Testing

To learn more about why facts matter, visit monaghanmed.com or stop by booth #413 this November at AARC Congress 2019 in New Orleans, LA.

monaghan means it matters®

Sunday

AARC Business Meeting
7:30 AM – 8:30 AM

Karen Schell DHSc RRT RRT-NPS RPFT/*Presiding*

This is the official 2019 Annual Business Meeting of the AARC. Reports from AARC leadership are presented. 2020 AARC officers, Board of Directors, and officers for the House of Delegates are installed. The meeting concludes with an address from 2019-2020 AARC President, Karen Schell.

Sputum Bowl Preliminaries
8:00 AM - 6:00 PM

Thomas Lamphere RRT RPFT FAARC/*Presiding*

Student teams from the AARC State Societies compete in the preliminary competitions. The top four teams will face off in the Finals on Monday, November 11th.

7th Thomas L Petty Memorial Lecture

Barry Make MD, Denver CO

What Would Dr. Tom Think of COPD Today?
8:40 AM - 9:30 AM

Content Category: CLP

Early in his career, Dr. Petty investigated the pathology of emphysema and airway disease in cigarette smokers. Later in his career, he was a proponent of the definition of COPD that incorporates airflow obstruction on spirometry and deemphasized emphysema and chronic bronchitis. This session will present the most recent information on the myriad effects of cigarette smoking including those not associated with airflow obstruction. The latest understanding of the effects of cigarette smoking are leading to deconstruction of the current definition of COPD.

Adult Acute Care Section Meeting

9:40 AM - 10:25 AM

Carl Hinkson MSc RRT FAARC/ *Presiding*

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

Neo-Peds Section Meeting

9:40 AM - 10:25 AM

Brad Kuch MHA RRT FAARC/ *Presiding*

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

Open Forum® – Poster Discussions #5

Supported by an unrestricted educational grant from

monaghan

10:00 AM - 11:55 AM

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

Open Forum® – Poster Discussions #6

Supported by an unrestricted educational grant from

monaghan

10:00 AM - 11:55 AM

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

(Symposium) Call to Action: Professional Resilience!

10:30 AM – 12:25 PM

▶Battling Burnout in Respiratory Care

10:30 AM - 11:05 AM

Andrew Miller BS RRT, Durham NC

Content Category: CLP

Respiratory care is often a high stress, demanding career that frequently results in burnout. This lecture will discuss the prevalence, causes, and how burnout effects patient outcomes. Data from across the care continuum will be shared and discussed.

Andrew Miller

RESPIRATORY CARE

Open Forum® Symposia
sponsored by
monaghan

Clinicians present the results of their scientific studies. Abstracts with a similar focus are clustered into a symposium to encourage discussions and interactions among investigators and observers; posters expand the information presented. 14 Open Forum Symposia will be presented during the 3 ½ days of AARC Congress 2019.

▶Terminal Extubation and Preventing Compassion Fatigue
11:10 AM - 11:45 AM

Carl Hinkson MS RRT FAARC, Maryville WA

Content Category: CLP

The withdrawal of life support is an integral part of the work for respiratory therapists working in the ICU. Despite how common the practice is, very few respiratory therapists receive adequate training regarding this practice. This presentation will cover mechanics of terminal extubation, how to communicate with families, and tips on self-care to prevent compassion fatigue.

▶How to Handle Disruptive Behavior
11:50 AM - 12:25 PM

Andrew Miller BS RRT, Durham NC

Content Category: CLP

Disruptive behavior is a problem in health care and is a major contributor to burnout. This lecture will discuss what defines disruptive behavior, causes of disruptive behavior, and their effect on worker morale. Strategies to combat disruptive behavior will be discussed.

(Symposium)
ECMO: The Personnel and Personal Side
10:30 AM – 12:25 PM

▶Developing an ECMO Program: The Personnel Perspective
10:30 AM - 11:05 AM

Ira Cheifetz MD FAARC, Durham NC

Content Category: NPS

While much is often discussed about advances in the care of the ECMO patient, one of the most important aspects of success is the development and support of the team. Whether starting a new ECMO program or advancing an established program, success depends on the people from leadership to bedside staff. This presentation will review key lessons from a personnel perspective in forming a cohesive, high-performing team. The team is always greater than the sum of the parts.

▶ECMO from a Patient and Her Family: The Personal Perspective
11:10 AM - 11:45 AM

Lindsey Tew, Newton Grove NC

Content Category: NPS

While much is written and presented about ECMO, little attention has been paid to the patient and family perspective. What is it like to be awake and cannulated on ECMO with ARDS and sepsis? An amazing young woman and her mother will share their ECMO journey. The patient is truly at the center of everything we do.


Carl Hinkson


Ira Cheifetz


Lindsey Tew

Industry Support Statement

- The AARC is proud of the collaboration we have had with friends in industry for many years, and we wish to acknowledge our appreciation for their unrestricted educational grants for AARC Congress 2019.
- All sponsored sessions will be identified in the program, with signage, and verbally at the lectern.
- The AARC accepts support only on the condition that the Program Committee be the sole owner of all sessions, including selection of speakers and topics.

(Symposium)

From Good to Great: Changing Respiratory Care Clinical Practice

10:30 AM – 11:05 AM

▶Why Change is Necessary – A Department Leader's Perspective

10:30 AM - 11:05 AM

David Vines RN RRT FAACP
Winfield IL

Content Category: MGT

Leading a respiratory care department through both evolutionary change and revolutionary change is challenging. This session will include the perspective of a clinical department leader responsible for creating change within an organization.

▶Why Change is Necessary – A Medical Director's Perspective

11:10 AM - 11:45 AM

Sara Mirza MD MS, Chicago IL

Content Category: MGT

Physicians rely on competent respiratory therapists to assess and treat complex patients with respiratory compromise. This session will discuss respiratory care department changes from the perspective of a physician and department medical director.

▶Why Change is Necessary – A Clinical Supervisor's Perspective

11:50 AM - 12:25 PM

Andrew Klein MS RRT AE-C, Chicago IL

Content Category: MGT

Managing during times of change in a respiratory care department can be challenging. This session will include the perspectives from a bedside clinical supervisor who led staff through changes being made in a respiratory care department.

(Symposium)

Pulmonary Hypertension Update

10:30 AM – 12:25 AM

This program is supported by an independent educational grant from Actelion Pharmaceuticals, a Janssen Pharmaceutical Company of Johnson & Johnson.

▶Pathophysiology and Clinical Manifestations of PH

10:30 AM - 11:05 AM

Speaker TBA

Content Category: CLP

The pathophysiology of pulmonary hypertension is not always completely identified, but the two main mechanisms are: increased pulmonary vascular resistance and increased pulmonary venous pressure. The signs and symptoms of pulmonary hypertension, in its early stages, might not be noticeable for months or even years. As the disease progresses, symptoms become worse.

▶PAH: A Patient's Perspective

11:10 AM - 11:45 AM

Paul Miniter MS, Yardley PA

Content Category: CLP

PAH is a rare disease and not all causes are known. While PAH can affect people at any age, the average patient is diagnosed in their late 40s. And although anyone can develop PAH, it affects almost 4 times as many women as men.

▶The Emerging Role of the Respiratory Therapist in PAH

11:50 AM - 12:25 PM

Tonya Zeiger RRT CPFT,
Jacksonville FL

Content Category: CLP

The Scientific Leadership Council of the Pulmonary Hypertension Association (PHA) has been actively developing an


David Vines


Sara Mirza


Andrew Klein


Tonya Zeiger

accreditation initiative for PH treating programs across the nation in order to improve the overall quality of care and outcomes of patients with PAH. In this effort, the PH Care Center Program was developed by the PHA to identify the PH programs with the infrastructure and experience to best manage the disease.

(Symposium)
Pulmonary Rehab 2019 and Beyond
10:30 AM – 11:45 PM

▶Pulmonary Rehabilitation: The 2019 Guidelines
10:30 AM - 11:05 AM

Brian Carlin MD FAARC, Sewickley PA

Content Category: CLP
This session will focus on the recently released guidelines for pulmonary rehabilitation with emphasis on how to integrate the recommendations into your rehabilitation practice.

▶Pulmonary Rehab and Telehealth: What Should We Be Doing?
11:10 AM - 11:45 AM

Brian Carlin MD FAARC, Sewickley PA

This session will look at the introduction of telehealth technologies into the management and evaluation of patients who are undergoing pulmonary rehabilitation. Strategies to integrate this technology into the practice of pulmonary rehabilitation will be discussed.

(Symposium)
What about the Diaphragm?
10:30 PM – 12:25 PM

▶Ventilator-Induced Diaphragm Dysfunction: What is the Evidence?
10:30 AM - 11:05 AM

Eddy Fan MD, Toronto Ontario

Content Category: AAC
The impact of mechanical ventilation on the diaphragm is a growing concern in the literature. This lecture will describe the current knowledge regarding diaphragm function during mechanical ventilation and areas of future study.

▶Mechanisms of Diaphragm Injury
11:10 AM - 11:45 AM

Luis Felipe Damiani MSc PhDc PT, Santiago

Content Category: AAC
There are various mechanisms of diaphragm injury discussed in the literature including atrophy, excessive effort, and eccentric contractions. This lecture will describe these mechanisms of injury and the current evidence (or lack of evidence) to support these concepts.

▶Diaphragm Protective Ventilation
11:50 AM - 12:25 PM

Thomas Piraino RRT, Beamsville ON

Content Category: AAC
Ventilator-induced diaphragm dysfunction is a growing concern in the literature. Various methods exist for monitoring patient effort, but minimal studies have used this information to adjust ventilation. This lecture will discuss the concept of diaphragm protective ventilation and present possible values to monitor for targeting an approach to ventilation that aims to protect the diaphragm.


Brian Carlin


Eddy Fan


Luis Felipe Damiani


Thomas Piraino

Engaged Students Become Engaged Professionals
10:30 AM - 11:05 AM

Lisa Trujillo DHSc, RRT, Ogden, UT

Content Category: EDU

Have you ever taken a moment to consider what specifically you are passionate about? What brings you joy and satisfaction, or is meaningful to you, or makes an impact in some way? This lecture will explore personal growth that comes from being engaged in service and advancing your education to getting involved in your professional organization and how this leads to learning opportunities, personal ownership, and satisfaction in your profession.

Pre-Hospital Management of Airway and Respiratory Injuries: Lessons of Military Transports
10:30 AM - 11:05 AM

Josh O'Sullivan RRT, USAF

Content Category: CLP

The prolonged wars in Southwest Asia have provided extensive experience in prehospital management of severe injuries and transport of patients to definitive care. This paper will review injuries seen in the prehospital setting, specifically airway injuries and respiratory distress, and their treatment during transport to treatment facilities.

(Symposium) Integrating Research into Your Education Program
11:10 PM – 12:25 PM

▶What Should the Goal Be?
11:10 AM - 11:45 AM

Lynda Goodfellow RRT AE-C FAARC, Peachtree City GA

Content Category: EDU

Respiratory therapy education programs remain at different levels for both entries to practice and for advancement once a practitioner has clinical experience. The didactic knowledge learned within these programs on evidence-based medicine and research should build in level and provide a baseline within each level of education. This lecture will discuss the recommended education to be provided at each education level and how to integrate these into your program successfully.

▶How to Find a Clinical Research Partner
11:50 AM - 12:25 PM

Natalie Napolitano MPH RRT FAARC, Philadelphia PA

Content Category: EDU

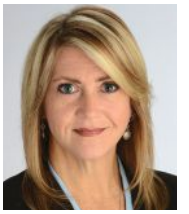
Many education programs nationally incorporate research into their curriculum. Unfortunately, many may have difficulty finding appropriate research mentors for their students. Having a few research partners for your program can assist in alleviating this problem. Finding a research partner can be challenging and working together on the expectations of the course is important for success.

Chronic Lung Disease, Hypoxia, and Air Travel
11:10 AM - 11:45 AM

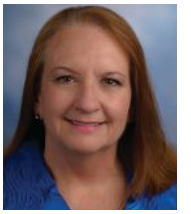
Jon Inkrott RRT RRT-ACCS, Orlando, FL

Content Category: AAC

The ascent to altitude is associated with hypobaric hypoxia. In patients with chronic lung disease these changes are exaggerated. What are the risks of air travel or aeromedical transport of patients with baseline hypoxemia? What is the HAST (High Altitude Simulation Test) and how is it performed? Titrating oxygen for air travel will be described and is important for patient safety.


Lisa Trujillo


Josh O'Sullivan


Lynda Goodfellow


Natalie Napolitano


Jon Inkrott

High Altitude Physiology Impact on the Patient with Respiratory Disease

11:50 AM - 12:25 PM

Dario Rodriquez Jr MSc RRT FAACP, Union KY

Content Category: AAC

Ascent to altitude and the resultant decrease in barometric pressure is associated with hypoxia and altitude related illness. This includes high altitude pulmonary edema, cerebral edema, joint pain, and upper airway discomfort. One mitigation strategy is cabin altitude restriction (maintenance of barometric pressure > 600 mm Hg). These factors will be discussed and the impact of changes in barometric pressure on equipment function will be reviewed.

Novel Approaches to Aerosol Medication Delivery to Pediatric Patients

11:50 AM - 12:25 PM

Bruce Rubin MBA MD MHA, Henrico VA

Content Category: NPS

Inhaled medications are vital to the care of patients with pulmonary disease and new medications are entering the market at a rapid pace. In addition, there is increasing interest in administering non-pulmonary medications via inhalation in an effort to avoid systemic exposure. With this constant change, it can be difficult for the pediatric therapist to maintain knowledge of currently available therapies. This presentation will focus on newly available medications and "non-traditional" medications delivered via inhalation.

The Role of the Respiratory Therapist in the Pain Clinic

11:50 AM - 12:25 PM

Daryl Smith MD, Denver CO

Content Category: CLP

The modern pain specialist does regional blocks of both outpatients and inpatients. Several of these blocks affect lung dynamics temporarily. Many of these patients can only tolerate these blocks with short term NIV managed by a RT. Therapists need to become members of the pain treatment team. They bring a special skill set to aid patients with chronic lung diseases receiving regional pain blocks.

Dario Rodriquez

Bruce Rubin

Open Forum® – Poster Discussions #7

Supported by an unrestricted educational grant from

monaghan

12:30 PM - 2:25 PM

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

Continuing Respiratory Care Education (CRCE)

AARC Congress 2019 is approved for all the credit hours you need to maintain your state license, more than 20 hours.

Open Forum® – Poster Discussions #8

Supported by an unrestricted educational grant from

monaghan

12:30 PM - 2:25 PM

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

Mangement Section Meeting

1:00 PM - 1:45 PM

Kim Bennion MSHS RRT CHC/
Presiding

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

(Symposium) 2019 COPD Symposium

1:45 PM – 4:20 PM

This progam is supported by an independent education grant from AstraZeneca and Mylan Specialty.

▶COPD Review: Update on GOLD 2019

1:45 PM - 2:20 PM

Brian Carlin MD FAARC, Sewickley PA

Content Category: CLP

This presentation will be covering research that has contributed to GOLD guideline updates and changes in practice for our COPD patients, bringing RTs from acute care to post-acute care together to learn about best practices and management strategies for this patient population.

Brian Carlin

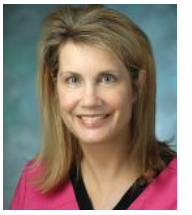
▶Misdiagnosis in Chronic Obstructive Pulmonary Disease

2:25 PM - 3:00 PM

Gail Drescher MA RRT RRT-ACCS, Riva MD

Content Category: CLP

Proper assessment and the ability to recommend appropriate treatment are important skills for all respiratory therapists. Learn about issues that lead to the misdiagnosis of COPD, including diagnostic problems and conditions that may mimic this disease. Additional topics include: the inclusion of COPD in 30-day readmission penalties, coding in COPD, and potential adverse events from improper diagnosis and treatment. Find out how misdiagnosis impacts both clinical and financial outcomes.



Gail Drescher

▶The Effects of Comorbid Conditions on COPD Outcomes

3:05 PM - 3:40 PM

Lanny Inabnit MS RRT, Concord NC

Content Category: CLP

COPD is the third leading cause of death by disease in the U.S. and continues to be a burden on the health care system. Patients with COPD often have other comorbid conditions that lead to early readmissions and increased length of stay. This leads to a tremendous cost burden. Practitioners need to be able to recognize the effect that these comorbid conditions can have. The presenter will outline the most prevalent comorbidities in patients with COPD and discuss the suggested outcome effects of these.

Lanny Inabnit

▶How to Optimize Aerosol Drug Delivery in COPD
3:45 PM - 4:20 PM

Arzu Ari PhD RRT FAARC, Round Rock TX

Content Category: CLP

Previous research has shown that there is a gap in health care providers' practice when prescribing inhalation delivery devices for the management of COPD. This presentation will review the current aerosol delivery devices used for the treatment of patients with COPD and provide strategies and recommendations to optimize aerosol drug delivery in this patient population.

(Symposium)
Pediatric Protocols
1:45 PM – 3:40 PM

▶Management of Pediatric Asthma
1:45 PM - 2:20 PM

Ariel Berlinski MD FAARC, Little Rock AK

Content Category: NPS

Asthma exacerbation is a common reason for hospitalization in the pediatric population. Management of asthma through protocol driven care can improve efficiency and reduce length of stay. This presentation will review current evidence related to pediatric asthma and discuss key components of a pediatric asthma management protocol.

▶Management of Bronchiolitis
2:25 PM - 3:00 PM

Dave Crotwell RRT RRT-NPS FAARC, Kirkland WA

Content Category: NPS

This session is designed to review the protocol for the management of bronchiolitis and its evolution of change over the past ten years, how it has impacted the workflow, management, and outcomes of these patients.

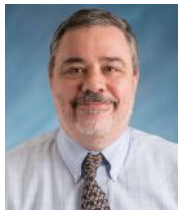
▶Instituting a Nitric Oxide Initiation and Weaning Protocol
3:05 PM - 3:40 PM

Heather McKelvy MHA RRT RRT-NPS, Menlo Park CA NPS

Content Category: NPS

Use of inhaled nitric oxide weaning protocols has been advocated in the pediatric population. This lecture will cover one institution's experience and timeline towards the development of a Nitric Oxide Initiation and Weaning protocol. Purpose of the initiative, including team members' roles, data collection, and education will be presented.


Arzu Ari


Ariel Berlinski


Dave Crotwell


Heather McKelvy

Exhibit Hall Hours:

Saturday, Nov. 9, 10:30 am – 4:00 pm
Sunday, Nov. 10, 9:30 am – 3:00 pm
Monday, Nov. 11, 9:30 am – 2:00 pm

34th New Horizons in Respiratory Care

Pediatric Respiratory Support

1:45 pm – 5:00 pm

Neonatal Respiratory Distress – The Golden Hour

1:45 PM - 2:20 PM

Craig Wheeler MS RRT RRT-NPS, Boston MA

Content Category: NPS

Early use of ventilation, both invasive and noninvasive, along with surfactant administration, has an important impact on outcomes. Oxygen administration may also impact response and long-term complications. This lecture will evaluate best practices in the first hour of life.

Pediatric and Neonatal High Flow Nasal Cannula

2:25 PM - 3:00 PM

Rob DiBlasi RRT RRT-NPS FAARC, Shoreline WA

Content Category: NPS

High flow nasal oxygen has altered the landscape of respiratory support in neonates and pediatrics. Patient comfort and development of end expiratory pressure are impacted by flow in L/kg which also impacts safety. When is HFNC indicated in these populations and in which patients?

Ventilator Liberation in the PICU

3:05 PM - 3:40 PM

Christopher Newth MD, Los Angeles CA

Content Category: NPS

Ventilator liberation and spontaneous breathing trials have become a standard of care in adults. Ventilator liberation in pediatrics and assessing weaning readiness has nuances that require additional considerations. This lecture will describe the current best practices for ventilator liberation in pediatrics.

Inhaled Pulmonary Vasodilators in the NICU and PICU

3:45 PM - 4:20 PM

Brian Walsh PhD RRT RRT-NPS, Lynchburg VA

Content Category: NPS

Both aerosolized pulmonary vasodilators and inhaled nitric oxide have a role in the neonatal and pediatric ICU. Delivery during NIV and invasive ventilation are possible, but the devil is in the details. When can these inhaled therapies be used, and what are the advantages and disadvantages of each?

The Role of High Frequency Ventilation in Neonatal and Pediatrics

4:25 PM - 5:00 PM

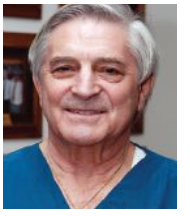
Jordan Rettig MD, Boston MA

Content Category: NPS

High frequency ventilation has found the greatest utility in neonates and pediatrics. Recent studies in adults have found no advantages in adults. What is the best practice evidence for high frequency ventilation in the neonatal and pediatric ICU?

Craig Wheeler

Rob DiBlasi



Christopher Newth

Brian Walsh

Jordan Rettig

(Symposium)
Speaking the Same Language: Standardizing RT Terms to Measure Patient Outcomes and the Value of RT Practice
1:45 PM – 3:00 PM

▶Data Science and the Respiratory Care Profession
1:45 PM - 2:20 PM

Constance Mussa PhD RRT RRT-NPS, Forest Park IL

Content Category: MGT
The shift from volume to value-based care and the ability to analyze extremely large and different types of data have contributed to challenges in health care evaluation and performance. This session will introduce the concept of data science, describe the drivers of big data and data science, and explain how RTs require a seat at the table to provide leadership relevant to how our contributions are measured.

▶Doing More with Bedside Data – A Mechanical Ventilation Focus
2:25 PM - 3:00 PM

Brian Walsh PhD RRT RRT-NPS, Lynchburg VA

Content Category: MGT
To err is human. Medical errors have become the 3rd leading cause of death in the U.S. With the advent of ventilator-associated events, could we leverage computers to help alert or predict who will have a VAE? The presenter will review the literature on computer-aided mechanical ventilation to help improve the quality of mechanical ventilation

Gen Z Goes to College: Characteristics, Traits, and Learning Preferences of Our Youngest Generation of Students
1:45 PM - 2:20 PM

Bill Galvin MSEd RRT FAARC, Havertown PA

Content Category: EDU
Generation Z are now entering college and will bring with them a unique set of traits and characteristics. What motivates them? What do they like/dislike? How do they learn? More importantly, what are their learning preferences? This presentation will address the characteristics of students born in the mid-1990s. It will identify their unique interests, needs, likes, and desires. It will identify their learning preferences and teaching/learning strategies to make education meaningful and effective for them.

Key Determinants of Successful Weaning in Long-Term Care
1:45 PM - 2:20 PM

Gene Gantt RRT FAARC, Livingston TN

Content Category: CLP
What does it take to achieve successful weaning in the long-term care setting? This lecture will provide information on protocols for weaning success and methods to achieve desired outcomes.


Constance Mussa


Brian Walsh


Bill Galvin


Gene Gantt

Mechanical Power and Ventilator-Induced Lung Injury
1:45 PM - 2:20 PM

William LeTourneau MA RRT RRT-ACCS, Rochester MN

Content Category: AAC

Does the recent introduction to the concept of mechanical power and focusing on the dynamic properties of tidal ventilation bring us closer to identifying a dangerous threshold index that indicates unsafe mechanical ventilation? This lecture will describe the concept of mechanical power and how it may be used to guide safe mechanical ventilation.

High-Fidelity Simulation in the Transport Environment
1:45 PM - 2:20 PM

Jennifer Watts RRT RRT-NPS C-NPT, Romeoville IL

Content Category: EDU

The transport environment remains an unpredictable place to provide care. By instituting the use of high-fidelity simulation within this environment, the "what-ifs" become easier to mitigate when caring for the transport patient.

Student Anxiety Is Real: The Benefits of Mindfulness Exercises in Class
2:25 PM - 3:00 PM

Jennifer Anderson EdD RRT RRT-NPS, Whichita Falls, TX

Content Category: EDU

Students today experience a tremendous amount of stress and anxiety. Anxiety can make it difficult for students to concentrate and learn. Mindfulness helps students be present in the moment, not to dwell on the past, or worry about the future. Attend this presentation to learn how to help students be better prepared to learn.

Using RCPs to Reduce Readmissions by Managing Complex Cardiopulmonary Patients in a Skilled Nursing Facility
2:25 PM - 3:00 PM

Victoria Florentine RRT CPFT AE-C, Fair Oaks CA

Content Category: CLP

Readmission reduction is THE hot topic in the post-acute world. Two patient populations with the highest risk of readmission are CHF and COPD, but respiratory therapists have yet to take the lead to address the issue. In Northern California, a respiratory company partnered with a 160-bed SNF to tackle the problem head on. The results prove that respiratory care practitioners are the key to stemming the tide of readmissions in this medically complex patient population.

Noninvasive Ventilation Outside of the ICU for Acute Respiratory Failure: Is It Safe?
2:25 PM - 3:00 PM

Robert Kacmarek PhD RRT FAARC, Littleton MA

Content Category: AAC

Noninvasive ventilation (NIV) is commonly used to treat acute respiratory failure, but where should it be utilized? Is it safe to use this modality outside of the emergency room or ICU? This lecture will examine the evidence and practical considerations regarding NIV outside of the ICU.

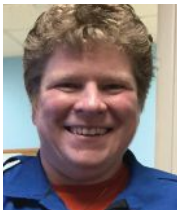
Aeromedical Transport of Casualties with ARDS
2:25 PM - 3:00 PM

Josh O'Sullivan RRT, USAF

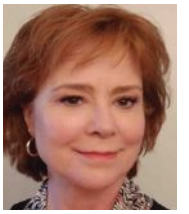
Content Category: CLP

This lecture will describe the injuries requiring mechanical ventilation during aeromedical transport in a war zone.


William LeTourneau


Jennifer Watts


Jennifer Anderson


Victoria Florentine


Robert Kacmarek


Josh O'Sullivan

Data on the impact of lung protective ventilation on outcomes in patients with and without ARDS will also be presented. Lifesaving interventions required during aeromedical transport will be listed in terms of frequency and severity.

(Symposium)
Airway Management
3:05 PM – 5:00 PM

▶Placing Artificial Airways: Endotracheal Tubes and Supraglottic Airways
3:05 PM - 3:40 PM

Eddy Fan MD PhD, Toronto ON

Content Category: AAC
This presentation will discuss different choices and approaches to placing artificial airways during routine airway management and what to do when things go awry.

▶Airway Assessment: Predicting the Difficult Airway
3:45 PM - 4:20 PM

Carl Hinkson MS RRT FAARC, Marysville WA

Content Category: AAC
This presentation will cover how clinicians can utilize a comprehensive airway assessment to anticipate problems encountered during airway management, and implement tools and strategies to prevent complications from intubation.

▶How Patent Is Your Patient's Airway? Managing Partially Occluded Endotracheal Tubes
4:25 PM - 5:00 PM

John Emberger RRT FAARC CPHQ, Bear DE

Content Category: AAC
Partial obstructions of the endotracheal tube can both create a life threatening situation and masquerade as respiratory failure causing longer length of stay on the ventilator. This lecture will discuss the devices that are available to detect and manage partial ETT obstructions as well as images and graphics of situations with partial occlusions.

(Symposium)
Managing Non-CF Bronchiectasis (NCF-BE)
3:05 PM – 4:20 PM

▶Home Management of Non-CF Bronchiectasis (NCF-BE) Among the COPD Community
3:05 PM - 3:40 PM

Zach Gantt RRT, Livingston TN

Content Category: CLP
This topic will explain the evolution of therapies and the most current pharmacological, therapy, and self-management skills to comprehensively manage comorbid NCF-BE in the COPD community.

▶Measures, Metrics, and Outcomes in Non-CF Bronchiectasis (NCF-BE) in the COPD Community
3:45 PM - 4:20 PM

Dan Easley BHS, Apollo PA

Content Category: CLP
This topic will explain how to implement screening, measure data, and track outcomes that will assist in managing NCF-BE patients, and how to use those outcomes to create protocols for COPD patients using technology to drive the plan of care.


Eddy Fan


Carl Hinkson


John Emberger


Zach Gantt


Dan Easley

PRO/CON: NIV vs. HFNC for Hypercapnic COPD Exacerbation: NIV is Superior

3:05 PM - 4:20 PM

PRO: Dean Hess PhD RRT FAARC, Danvers MA

CON: Thomas Piraino RRT, Beamsville ON

Content Category: AAC

An exacerbation of COPD represents a challenge for the care team. In the face of hypercarbia, improved ventilation and rest of the respiratory muscles is paramount.

The Intersection of Education, Clinical Practice, and Research

3:05 PM - 4:20 PM

Dave Burnett PhD RRT AE-C, Kansas City KS

Content Category: EDU

Respiratory therapists and program faculty are discovering opportunities to work within a variety of settings. Although respiratory therapists may flourish in the education, clinical, or research environment, they can also thrive in all three at once. This presentation will discuss how to successfully bring together education, clinical practice, and research experiences into the same setting.

(Symposium)

Strategic Onboarding and Succession Planning: A Win-Win for Everyone!

3:05 PM – 4:20 PM

▶Onboarding New Respiratory Care Services Leadership

3:05 PM - 3:40 PM

Margie Pierce MS RRT CPFT, Philadelphia PA

Content Category: MGT

New leadership onboarding can prove challenging; therefore, key elements of identifying, growing, and onboarding new leaders is imperative to reduce the loss of respiratory care leadership knowledge and strategic positioning. Join this expert as she presents key concepts and stresses the need for formal, strategically implemented succession planning for long-term respiratory care viability.

▶Succession Planning: Developing Future RT Leaders

3:45 PM - 4:20 PM

Cheryl Hoerr MBA RRT FAARC, Rolla MO

Content Category: MGT

Succession planning is simply the process of developing your people. Many RT departments do not have a strategic plan for identifying and preparing therapists to advance in the department or organization. A lack of succession planning can lead to department chaos when key people decide to move on. Come to this session and discover proven techniques to improve your department's succession planning.

Dean Hess

Thomas Piraino

Dave Burnett

Margie Pierce

Cheryl Hoerr

Open Forum® – Poster Discussions #9

Supported by an unrestricted educational grant from

monaghan

3:10 PM - 5:05 PM

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

Open Forum® – Poster Discussions #10

Supported by an unrestricted educational grant from

monaghan

3:10 PM - 5:05 PM

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

Pediatric VAE – Where Are We Now?

3:45 PM - 4:20 PM

Kathleen Deakins MHA RRT FAARC, Chardon OH

Content Category: NPS

The CDC has moved to monitoring Pediatric VAE instead of VAP. This presentation will review the definition, incidence, and factors that may reduce the impact of pediatric VAE.

Hot Topics from the World of Higher Education: What RC Faculty "Need to Know"

3:45 PM - 5:00 PM

Bill Galvin MSEd RRT FAARC, Havertown PA

Content Category: EDU

Higher education is undergoing considerable change. Issues include: changing demographics, funding, campus safety, student unrest, and questions related to mission realignment and degree creep. These issues and more will reshape the higher education landscape. This session will provide an opportunity to learn more about the impact of these issues, and to discuss experiences related to these issues with colleagues.

Kathleen Deakins

Bill Galvin

Open Forum® Symposia
sponsored by
monaghan

Clinicians present the results of their scientific studies. Abstracts with a similar focus are clustered into a symposium to encourage discussions and interactions among investigators and observers; posters expand the information presented. 14 **Open Forum** Symposia will be presented during the 3½ days of AARC Congress 2019.

Home Monitoring of High-Risk Opioid Patients – Isn't That Just Overkill?

4:25 PM - 5:00 PM

Kim Bennion MSHS RRT CHC, Murray UT

Content Category: MGT

Respiratory therapy is in a unique position to lead CQI projects. Join the presenter as she describes their alarming findings at three hospitals regarding high-risk opioid patients. She will share the protocol and other tools to create, implement, and describe the value of such a process, so that you can get a jump ahead in approaching your leadership regarding this innovative, lifesaving "patient at home" monitoring.

Patients Should Be Extubated 24/7

4:25 PM - 5:00 PM

Stephen Hepditch BS RRT RRT-NPS, Durham NC

Content Category: NPS

Hospitals operate 24/7, but staffing levels and available services change when the sun goes down. This discussion will debate the relative merits of extubating patients when they are ready, regardless of the time of day.

Content Categories

AAC — Adult Acute Care
CLP — Clinical Practice
EDU — Education
ETH — Ethics
MGT — Management
NPS — Neonatal/Pediatrics
PFT — Pulmonary Function
PTS — Patient Safety
SDS — Sleep Medicine

A Primer in Home Oxygen Therapy Equipment and Delivery Devices for Hospital Respiratory Therapists

4:25 PM - 5:00 PM

Mark Mangus Sr RRT RPFT FAARC, San Antonio TX

Content Category: CLP

Providing oxygen therapy within the hospital involves use of equipment and delivery adjuncts that are quite different from providing oxygen therapy in the home. Home oxygen therapy poses challenges and limitations not encountered by hospital RTs. A better understanding of the capabilities and limitations of home oxygen therapy equipment and its adjuncts can help bridge the gap and transition from hospital to home for patients requiring continued and long-term oxygen therapy.

Inhaler Effort: Too Fast or Too Slow? Measuring Peak Inspiratory Flow is the Only Way to Know!

4:25 PM - 5:00 PM

Adam Mullaly BS RRT AE-C, Bryn Mawr PA

Content Category: AAC

There are currently 9 different types of inhalers used to deliver asthma/COPD medications, all with varying levels of resistance. Evidence suggests that optimal peak inspiratory flow effort using these inhalers is important for effective medication delivery, and that sub-optimal peak inspiratory flow efforts may, in fact, contribute to unnecessary hospital admissions. Should we all be evaluating peak inspiratory flow (PIF) efforts?


Kim Bennion


Stephen Hepditch


Mark Mangus


Adam Mullaly

Visit Booth #921 at AARC Congress 2019

ONCE-DAILY
YUPELRI®
revefenacin inhalation solution
Relief that matters

FOR THE DAILY STRUGGLES OF COPD

The FIRST AND ONLY once-daily nebulized LAMA, for a full 24 hours of lung function improvement[1]

Proven 24-hour control[1]
Consistent improvement in trough FEV_1 vs placebo over 24 hours on days 84/85[1,2]

The primary endpoint was change from baseline in trough (predose) FEV_1 at day 85 vs placebo: YUPELRI demonstrated a statistically significant difference vs placebo in study 1 (146 mL, *P*<.0001 [YUPELRI, n=189; placebo, n=191]) and study 2 (147 mL, *P*<.0001 [YUPELRI, n=181; placebo, n=187]).[1,2]

In study 1, LS mean changes from baseline in FEV_1 ranged from 55.8 mL to 240.4 mL in the YUPELRI group, and from -113.6 mL to 59.6 mL in the placebo group. In study 2, LS mean changes from baseline in FEV_1 ranged from 19.8 mL to 148.5 mL in the YUPELRI group, and from -176.4 mL to -13.0 mL in the placebo group.

In studies 1 and 2, a prespecified exploratory analysis using serial spirometry was performed on a substudy population (YUPELRI, n=89; placebo, n=83) over 24 hours on days 84/85. In a pooled analysis, YUPELRI demonstrated consistent improvement in trough FEV_1 vs placebo over the 24-hour period.

Demonstrated safety profile[1]
Refer to the Important Safety Information below for additional information

Once-daily dosing[1]
Administered with any standard jet nebulizer with a mouthpiece

Up to 100% of patients with Medicare Part B are expected to be covered*
Permanent J-CODE J7677

*This is not a guarantee of coverage. Site of care will determine coverage. Check with your patient's insurance provider for coverage rules and restrictions. In certain limited instances, YUPELRI may be covered through a patient's Medicare Part D pharmacy benefit.

Indication

YUPELRI® inhalation solution is indicated for the maintenance treatment of patients with chronic obstructive pulmonary disease (COPD).

Important Safety Information

YUPELRI is contraindicated in patients with hypersensitivity to revefenacin or any component of this product.

YUPELRI should not be initiated in patients during acutely deteriorating or potentially life-threatening episodes of COPD, or for the relief of acute symptoms, i.e., as rescue therapy for the treatment of acute episodes of bronchospasm. Acute symptoms should be treated with an inhaled short-acting $beta_2$-agonist.

As with other inhaled medicines, YUPELRI can produce paradoxical bronchospasm that may be life-threatening. If paradoxical bronchospasm occurs following dosing with YUPELRI, it should be treated immediately with an inhaled, short-acting bronchodilator. YUPELRI should be discontinued immediately and alternative therapy should be instituted.

YUPELRI should be used with caution in patients with narrow-angle glaucoma. Patients should be instructed to immediately consult their healthcare provider if they develop any signs and symptoms of acute narrow-angle glaucoma, including eye pain or discomfort, blurred vision, visual halos or colored images in association with red eyes from conjunctival congestion and corneal edema.

Worsening of urinary retention may occur. Use with caution in patients with prostatic hyperplasia or bladder-neck obstruction and instruct patients to contact a healthcare provider immediately if symptoms occur.

Immediate hypersensitivity reactions may occur after administration of YUPELRI. If a reaction occurs, YUPELRI should be stopped at once and alternative treatments considered.

The most common adverse reactions occurring in clinical trials at an incidence greater than or equal to 2% in the YUPELRI group, and higher than placebo, included cough, nasopharyngitis, upper respiratory infection, headache and back pain.

Coadministration of anticholinergic medicines or OATP1B1 and OATP1B3 inhibitors with YUPELRI is not recommended.

YUPELRI is not recommended in patients with any degree of hepatic impairment.

Please see Brief Summary of Full Prescribing Information on the adjacent pages.

Learn more at YUPELRIHCP.com

References: 1. YUPELRI [package insert]. Morgantown, WV: Mylan Specialty L.P.; May 2019. **2.** Data on file.

Mylan® Theravance Biopharma

YUPELRI® (revefenacin) inhalation solution, for oral inhalation

Initial U.S. Approval: 2018

FULL PRESCRIBING INFORMATION

INDICATIONS AND USAGE

YUPELRI inhalation solution is indicated for the maintenance treatment of patients with chronic obstructive pulmonary disease (COPD).

CONTRAINDICATIONS

YUPELRI is contraindicated in patients with hypersensitivity to revefenacin or any component of this product.

WARNINGS AND PRECAUTIONS

Deterioration of Disease and Acute Episodes

YUPELRI should not be initiated in patients during acutely deteriorating or potentially life-threatening episodes of COPD. YUPELRI has not been studied in subjects with acutely deteriorating COPD. The initiation of YUPELRI in this setting is not appropriate.

YUPELRI is intended as a once-daily maintenance treatment for COPD and should not be used for relief of acute symptoms, i.e. as rescue therapy for the treatment of acute episodes of bronchospasm, and extra doses should not be used for that purpose. Acute symptoms should be treated with an inhaled, short-acting beta$_2$-agonist.

COPD may deteriorate acutely over a period of hours or chronically over several days or longer. If YUPELRI no longer controls symptoms of bronchoconstriction, the patient's inhaled, short-acting beta$_2$-agonist becomes less effective, or the patient needs more inhalations of a short-acting beta$_2$-agonist than usual, these may be markers of deterioration of disease. In this setting, a re-evaluation of the patient and the COPD treatment regimen should be undertaken at once. Increasing the daily dose of YUPELRI beyond the recommended dose is not appropriate in this situation.

Paradoxical Bronchospasm

As with other inhaled medicines, YUPELRI can produce paradoxical bronchospasm that may be life-threatening. If paradoxical bronchospasm occurs following dosing with YUPELRI, it should be treated immediately with an inhaled, short-acting bronchodilator; YUPELRI should be discontinued immediately and alternative therapy should be instituted.

Worsening of Narrow-Angle Glaucoma

YUPELRI should be used with caution in patients with narrow-angle glaucoma. Prescribers and patients should be alert for signs and symptoms of acute narrow-angle glaucoma (e.g. eye pain or discomfort, blurred vision, visual halos or colored images in association with red eyes from conjunctival congestion and corneal edema). Instruct patients to consult a physician immediately if any of these signs or symptoms develops.

Worsening of Urinary Retention

YUPELRI should be used with caution in patients with urinary retention. Prescribers and patients should be alert for signs and symptoms of urinary retention (e.g. difficulty passing urine, painful urination), especially in patients with prostatic hyperplasia or bladder-neck obstruction. Instruct patients to consult a healthcare provider immediately if any of these signs or symptoms develops.

Immediate Hypersensitivity Reactions

Immediate hypersensitivity reactions may occur after administration of YUPELRI. If such a reaction occurs, therapy with YUPELRI should be stopped at once and alternative treatments should be considered.

ADVERSE REACTIONS

The following potential adverse reactions are described in greater detail in other sections:

- Paradoxical bronchospasm *[see Warnings and Precautions]*
- Worsening of narrow-angle glaucoma *[see Warnings and Precautions]*
- Worsening of urinary retention *[see Warnings and Precautions]*
- Immediate hypersensitivity reactions *[see Warnings and Precautions]*

Clinical Trial Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice.

The YUPELRI safety database included 2,285 subjects with COPD in two 12-week efficacy studies and one 52-week long-term safety study. A total of 730 subjects received treatment with YUPELRI 175 mcg once daily. The safety data described below are based on the two 12-week trials and the one 52-week trial.

12-Week Trials

YUPELRI was studied in two 12-week replicate placebo-controlled trials in patients with moderate to very severe COPD (Trials 1 and 2). In these trials, 395 patients were treated with YUPELRI at the recommended dose of 175 mcg once daily.

The population had a mean age of 64 years (range from 41 to 88 years), with 50% males, 90% Caucasian, and had COPD with a mean post-bronchodilator forced expiratory volume in one second (FEV_1) percent predicted of 55%. Of subjects enrolled in the two 12-week trials, 37% were taking concurrent LABA or ICS/LABA therapy. Patients with unstable cardiac disease, narrow-angle glaucoma, or symptomatic prostatic hypertrophy or bladder outlet obstruction were excluded from these trials.

Table 1 shows the most common adverse reactions that occurred with a frequency of greater than or equal to 2% in the YUPELRI group and higher than placebo in the two 12 week placebo- controlled trials.

The proportion of subjects who discontinued treatment due to adverse reactions was 13% for the YUPELRI-treated subjects and 19% for placebo-treated subjects.

Table 1: Adverse Events with YUPELRI ≥2% Incidence and Higher than Placebo

	Placebo (N = 418)	YUPELRI 175 mcg (N = 395)
Respiratory, Thoracic and Mediastinal Disorders		
Cough	17 (4%)	17 (4%)
Infections and Infestations		
Nasopharyngitis	9 (2%)	15 (4%)
Upper respiratory tract infection	9 (2%)	11 (3%)
Nervous System Disorders		
Headache	11 (3%)	16 (4%)
Musculoskeletal and Connective Tissue Disorders		
Back pain	3 (1%)	9 (2%)

Other adverse reactions defined as events with an incidence of ≥1.0%, less than 2.0%, and more common than with placebo included the following: hypertension, dizziness, oropharyngeal pain, and bronchitis.

52-Week Trial

YUPELRI was studied in one 52-week, open-label, active-control (tiotropium 18 mcg once daily) trial in 1,055 patients with COPD. In this trial, 335 patients were treated with YUPELRI 175 mcg once daily and 356 patients with tiotropium. The demographic and baseline characteristics of the long-term safety trial were similar to those of the placebo-controlled 12-week studies described, with the exception that concurrent LABA or LABA/ICS therapy was used in 50% of patients. The adverse reactions reported in the long-term safety trial for YUPELRI were consistent with those observed in the placebo-controlled studies of 12-weeks.

DRUG INTERACTIONS

Anticholinergics

There is potential for an additive interaction with concomitantly used anticholinergic medicines. Therefore, avoid coadministration of YUPELRI with other anticholinergic-containing drugs as this may lead to an increase in anticholinergic adverse effects *[see Warnings and Precautions]*.

Transporter-Related Drug Interactions

OATP1B1 and OATP1B3 inhibitors (e.g. rifampicin, cyclosporine, etc.) could lead to an increase in systemic exposure of the active metabolite. Therefore, coadministration with YUPELRI is not recommended *[see Clinical Pharmacology]*.

USE IN SPECIFIC POPULATIONS

Pregnancy

Risk Summary

There are no adequate and well-controlled studies with YUPELRI in pregnant women. Women should be advised to contact their physician if they become pregnant while taking YUPELRI. In animal reproduction studies, subcutaneous administration of revefenacin to pregnant rats and rabbits during the period of organogenesis produced no evidence of fetal harm at respective exposures approximately 209 times the exposure at the maximum recommended human dose (MRHD) (on an area under the curve [AUC] basis) *(see Data)*.

The estimated background risk of major birth defects and miscarriage for the indicated population is unknown. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2-4% and 15-20%, respectively.

Data

Animal Data

In an embryo fetal development study in pregnant rats dosed during the period of organogenesis from gestation days 6 to 17, revefenacin was not teratogenic and did not affect fetal survival at exposures up to 209 times the MRHD (based upon summed AUCs for revefenacin and its active metabolite at maternal subcutaneous doses up to 500 mcg/kg/day).

In an embryo fetal development study in pregnant rabbits dosed during the period of organogenesis from gestation days 7 to 19, revefenacin was not teratogenic and did not affect fetal survival at exposures up to 694 times the MRHD (based upon summed AUCs for revefenacin and its active metabolite at maternal subcutaneous doses up to 500 mcg/kg/day).

Placental transfer of revefenacin and its active metabolite was observed in pregnant rabbits.

In a pre- and postnatal development (PPND) study in pregnant rats dosed during the periods of organogenesis and lactation from gestation day 6 to lactation day 20, revefenacin had no adverse developmental effects on pups at exposures up to 196 times the MRHD (based upon summed AUCs for revefenacin and its active metabolite at maternal subcutaneous doses up to 500 mcg/kg/day).

Lactation

Risk Summary

There is no information regarding the presence of revefenacin in human milk, the effects on the breastfed infant, or the effects on milk production. However, revefenacin was present in the milk of lactating rats following dosing during pregnancy and lactation *(see Data)*.

The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for YUPELRI and any potential adverse effects on the breastfed infant from YUPELRI or from the underlying maternal condition.

Data

Animal Data

In a PPND study *[see Pregnancy]*, revefenacin and its active metabolite were present in milk of lactating rats on lactation day 22. Milk-to-plasma concentration ratios were up to 10 for revefenacin and its active metabolite.

Pediatric Use

YUPELRI is not indicated for use in children. The safety and efficacy in pediatric patients have not been established.

Geriatric Use

Based on available data, no adjustment of the dosage of YUPELRI in geriatric patients is necessary.

Clinical trials of YUPELRI included 441 subjects aged 65 years and older, and of those, 101 subjects were aged 75 years and older. No overall differences in safety or effectiveness were observed between these subjects and younger subjects, and other reported clinical experience has not identified differences in responses between the elderly and younger patients, but greater sensitivity of some older individuals cannot be ruled out.

Hepatic Impairment

The systemic exposure of revefenacin is unchanged while that of its active metabolite is increased in subjects with moderate hepatic impairment. The safety of YUPELRI has not been evaluated in COPD patients with mild-to-severe hepatic impairment. YUPELRI is not recommended in patients with any degree of hepatic impairment. *[see Clinical Pharmacology]*.

Renal Impairment

No dosage adjustment is required in patients with renal impairment. Monitor for systemic antimuscarinic side effects in COPD patients with severe renal impairment. *[see Clinical Pharmacology]*.

OVERDOSAGE

An overdose of YUPELRI may lead to anticholinergic signs and symptoms such as nausea, vomiting, dizziness, lightheadedness, blurred vision, increased intraocular pressure (causing pain, vision disturbances, or reddening of the eye), obstipation or difficulties in voiding. In COPD patients, orally inhaled administration of YUPELRI at a once-daily dose of up to 700 mcg (4 times the maximum recommended daily dose) for 7 days was well tolerated.

Treatment of overdosage consists of discontinuation of YUPELRI along with institution of appropriate symptomatic and/or supportive therapy.

NONCLINICAL TOXICOLOGY

Carcinogenesis, Mutagenesis, Impairment of Fertility

Two-year inhalation studies in Sprague-Dawley rats and CD1 mice were conducted to assess the carcinogenic potential of revefenacin. No evidence of tumorigenicity was observed in male and female rats at inhaled doses up to 338 mcg/kg/day (approximately 35 times the MRHD based upon summed AUCs for revefenacin and its active metabolite). No evidence of tumorigenicity was observed in male and female mice at inhaled doses up to 326 mcg/kg/day (approximately 40 times the MRHD based on summed AUCs for revefenacin and its active metabolite).

Revefenacin and its active metabolite were negative for mutagenicity in the Ames test for bacterial gene mutation. Revefenacin was negative for genotoxicity in the *in vitro* mouse lymphoma assay and *in vivo* rat bone marrow micronucleus assay.

There were no effects on male or female fertility and reproductive performance in rats at subcutaneous revefenacin doses up to 500 mcg/kg/day (approximately 30 times the MRHD on an mg/m^2 basis for revefenacin).

PATIENT COUNSELING INFORMATION

Advise the patient to read the FDA-approved patient labeling (Patient Information and Instructions for Use) with each new prescription and refill.

Not for Acute Symptoms

Inform patients that YUPELRI is not meant to relieve acute symptoms of COPD and extra doses should not be used for that purpose. Advise patients to treat acute symptoms with an inhaled, short-acting beta$_2$-agonist such as albuterol. Provide patients with such medicine and instruct them in how it should be used.

Instruct patients to seek medical attention immediately if they experience any of the following:

- Decreasing effectiveness of inhaled, short-acting beta$_2$-agonists
- Need for more inhalations than usual of inhaled, short-acting beta$_2$-agonists
- Significant decrease in lung function as outlined by the physician

Tell patients they should not stop therapy with YUPELRI without healthcare provider guidance since symptoms may recur after discontinuation.

Paradoxical Bronchospasm

As with other inhaled medicines, YUPELRI can cause paradoxical bronchospasm. If paradoxical bronchospasm occurs, instruct patients to discontinue YUPELRI.

Worsening of Narrow-Angle Glaucoma

Instruct patients to be alert for signs and symptoms of acute narrow-angle glaucoma (e.g. eye pain or discomfort, blurred vision, visual halos, or colored images in association with red eyes from conjunctival congestion and corneal edema). Instruct patients to consult a healthcare provider immediately if any of these signs or symptoms develops.

Worsening of Urinary Retention

Instruct patients to be alert for signs and symptoms of urinary retention (e.g. difficulty passing urine, painful urination). Instruct patients to consult a healthcare provider immediately if any of these signs or symptoms develops.

Instructions for Administering YUPELRI

It is important for patients to understand how to correctly administer YUPELRI using a standard jet nebulizer [see Instructions for Use]. Instruct patients that YUPELRI should only be administered via a standard jet nebulizer. Patients should be instructed not to inject or swallow the YUPELRI solution. Patients should be instructed not to mix other medications with YUPELRI.

Patients should not inhale more than one dose at any one time. The daily dosage of YUPELRI should not exceed one unit-dose vial. Inform patients to use the contents of one vial of YUPELRI orally inhaled daily at the same time every day. Patients should throw the plastic dispensing vials away immediately after use. Due to their small size, the vials pose a danger of choking to young children.

The brands listed are trademarks of their respective owners.

Theravance® Biopharma Mylan®

Made in USA

YUPELRI® is a Registered Trademark of Mylan Specialty L.P., Morgantown, WV 26505, USA

Patented. See YUPELRI.com/patents

REV-2019-0194

Monday

46th Donald F Egan Scientific Memorial Lecture

Lluís Blanch MD PhD, Sabadell Barcelona

Asynchrony - Detection, Clusters and Outcomes

8:00 AM - 8:45 AM

Content Category: AAC

Describe the impact of asynchrony on important clinical outcomes. List the most common types of asynchrony, asynchrony detection, and mitigation. Describe the automated detection of asynchrony and how technology can facilitate patient care.

Flag Folding Ceremony

8:50 AM - 9:20 AM

Joseph Buhain EdD RRT FAARC/*Presiding*

Harry Roman MA RRT FAARC/*Presiding*

Wadie Williams MA RRT/*Presiding*

An AARC tradition like no other, attend the AARC Flag Folding Ceremony and celebrate the rich tradition of the US Military and Armed Forces. RT veterans and active duty respiratory therapists conduct a moving ceremony as we recognize those who serve, those who have served, and those we have lost.

Student Symposium for New Professionals

8:35 AM – 12:25 PM

▶Getting That Dream Job

8:35 AM - 9:10 AM

Cheryl Hoerr MBA RRT FAARC, Rolla MO

This presentation will provide an explanation of the value of marketing and how you can use key marketing principles to position yourself for your dream job. We will also outline techniques to conduct an effective job search, along with a brief overview on how to develop your cover letter and resume. The presenter will discuss common mistakes and pitfalls of job seekers, including those that may cost you the position before you are hired.

▶What It Means to Be a Professional

9:15 AM - 9:45 AM

Dana Evans MHA RRT RRT-NPS, Chicago IL

This presentation will focus on preparing the respiratory care student to transition into professional life as a respiratory therapist. The presenter will discuss demonstrating professionalism in student environments (clinical rotations, professional meetings, etc.), applying and interviewing for a job, and maintaining professionalism after graduation.

▶Messages from Your AARC President

9:50 AM - 10:25 AM

Karen Schell DHSc RRT RRT-NPS RPFT, Frankfort KS

The President of the AARC will meet with students to answer questions and discuss the importance of the role students play in advancing the profession.

▶Acquiring Your Credential: Success on the Therapist Multiple Choice Examination

10:30 AM - 11:05 AM

Bill Galvin MSEd RRT FAARC, Havertown PA

The presentation will address the factors that make for success in the examination process. It will cover preparatory issues and what you will experience onsite as well as test-taking strategies and techniques. Emphasis will be placed on the new Therapist Multiple-Choice Examination (TMC).

▶Acquiring Your Credential: Success on the Clinical Simulation Examination

11:10 AM - 11:45 PM

Bill Galvin MSEd RRT FAARC

This presentation will serve as a sequel to the previous one and will address the factors that make for success on the Clinical Simulation Examination. It will cover such issues as exam content structure and unique strategies for progressing through a branching logic type of exam. It will also highlight recent changes in policy.

▶Finding Your "Why"

11:50 AM - 12:25 PM

Joseph Ariale Jr RRT, Summerville SC

Mandy De Vries BHS RRT, Charleston SC

Finding your "Why" or your passion will give you the motivation to get involved and stay involved leading to a very fulfilled and positive respiratory career. Come in and join us for a little motivation and a story of two very different respiratory therapists finding their "Why" through their respiratory educational and career journeys


Cheryl Hoerr


Dana Evans


Karen Schell


Bill Galvin


Joseph Ariale


Mandy De Vries

Open Forum® – Editors' Choice

Supported by an unrestricted educational grant from

monaghan

9:00 AM - 11:30 AM

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

Diagnostics Section Meeting

9:55 AM - 10:25 AM

Katrina Hynes MHA RRT RPFT/ ***Presiding***

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

Open Forum® – Posters Only #2

Supported by an unrestricted educational grant from

monaghan

10:30 AM - 1:00 PM

Researchers and clinicians present the results of their work in this Posters Only session.

(Symposium)

Neonatal Noninvasive Ventilation

10:30 AM – 12:25 PM

Kimberly Firestone

Bradley Kuch

▶Practical Bedside Management of Neonates on Noninvasive Ventilation

10:30 AM - 11:05 AM

Kimberly Firestone MSc RRT, Canton OH

Content Category: NPS

This lecture will review the management strategies and techniques of various interface systems, securement devices, and skin barrier systems, along with extubation techniques for successful noninvasive ventilation. Audience participation to share clinical experiences, pearls, and helpful tips will be encouraged.

▶Bubble CPAP: What Does the Research Say?

11:10 AM - 11:45 AM

Bradley Kuch MHA RRT FAARC, Havertown PA

Content Category: NPS

Bubble CPAP is an increasingly common noninvasive method of support in the NICU. The presenter will review current research related to this mode of noninvasive support.

▶NIV-NAVA: Is This a Valid Mode for Our Neonates?

11:50 AM - 12:25 PM

Kerrie Meinert MHA RRT RRT-NPS, Kansas City MO

Content Category: NPS

Noninvasive support in the NICU is vital to reduce the incidence of lung injury. Many methods of providing this type of support are available to the RT. Noninvasive NAVA is an increasingly used mode of support in the neonatal environment, but what is the impact of this mode? This presentation will review currently available research on this subject.

(Symposium)
New and Emerging Bronchoscopic Procedures
10:30 AM - 12:25 PM

▶New and Emerging Bronchoscopic Procedures
10:30 AM - 11:05 AM

Renee Kiourkas MS RRT RPFT, Chicago IL

Content Category: PFT
This presentation will cover bronchoscopic procedures for the diagnosis and treatment of pulmonary conditions, with an overview of the newer bronchoscopic techniques such as cryo-techniques, argon plasma coagulation, navigational bronchoscopy, balloon blockers, balloon dilation, and more. The role of the respiratory therapist will be discussed.

▶Oxygen Management and Hypoxia During Bronchoscopic Procedures
11:10 AM - 11:45 AM

Prema Nanavaty MD, Chicago IL

Content Category: PFT
This talk is an overview in the management of the hypoxic patient for respiratory therapists performing bronchoscopy procedures, and will also look at oxygen devices and techniques related to better outcomes from potential complications that can arise during bronchoscopy procedures when a patient becomes hypoxic.

▶Building a Successful Bronchoscopy Assist Program
11:50 AM - 12:25 PM

Ellen Moran MS RRT RPFT, Evergreen Park IL

Content Category: PFT
This topic will cover education, competency, and specific requirements that are essential for training clinicians when building a successful Bronchoscopy Assist Program, including meeting new industry standards.

PRO/CON: NIV vs. HFNC for the Prevention of Postextubation Respiratory Failure: NIV Is Superior
10:30 AM - 11:45 AM

PRO: Rich Kallet MSc RRT FAACP, San Francisco, CA

CON: Neil MacIntyre MD FAARC, Durham NC

Content Category: AAC
Both NIV and HFNC have been evaluated for the prevention of postextubation failure. Which is better? Two experts will debate these two commonly used modalities.

(Symposium)
Prone Position in ARDS
10:30 AM - 11:45 AM

▶Physiologic Rationale for Prone Positioning
10:30 AM - 11:05 AM

Lluís Blanch MD PhD, Sabadell Barcelona

Content Category: AAC
Prone position has been shown to improve oxygenation and reduce mortality associated with severe ARDS. This lecture will provide an overview of the changes in gas exchange and lung mechanics associated with the prone position.

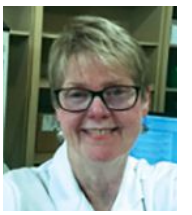
▶Positioning and Management of a Patient in the Prone Position
11:10 AM - 11:45 AM

Brady Scott MSEd RRT FAACP, Wheaton IL

Content Category: AAC
Placing a patient in the prone position can be a daunting task. This lecture will review strategies to safely place a patient in the prone position. Subsequent management of these patients will also be presented.


Renee Kiourkas


Prema Nanavaty


Ellen Moran


Rich Kallet


Neil MacIntyre


Lluís Blanch


Brady Scott

▶Hypoglossal Nerve Stimulator: An Alternate Therapy for Obstructive Sleep Apnea

10:30 AM - 11:05 AM

Meena Khan MD, Columbus OH

Content Category: SDS

This session will educate attendees on the hypoglossal nerve stimulator for the treatment of obstructive sleep apnea. Attendees will learn the mechanism of action, the appropriate candidate to be considered for HNS, data on effectiveness, and potential pitfalls of therapy.

▶Phrenic Nerve Stimulator: An Alternate Therapy for Central Sleep Apnea

11:10 AM - 11:45 AM

Meena Khan MD

Content Category: SDS

The attendees will learn about the phrenic nerve stimulator as a treatment for central sleep apnea, including the mechanism of action, data on effectiveness, and appropriate candidate selection for this therapy.

Recruiting Talent: A Panel Discussion

10:30 AM - 11:45 AM

Joel Brown BS RRT FAARC, Oxford PA

Jeffrey Davis BS RRT, Los Angeles CA

Dana Evans MHA RRT RRT-NPS, Chicago IL

Cheryl Hoerr MBA RRT FAARC, Rolla MO

Content Category: MGT

Finding the right person for the right job can be difficult. Hiring managers are faced with attracting and engaging qualified and skilled respiratory therapists in order to find the candidate that fits. In this panel discussion, hiring managers discuss effective hiring practices and what qualities they look for in a candidate.

Respiratory Care Pharmacology and Therapeutics: Additions and Deletions in Your Practice

10:30 AM - 11:05 AM

Douglas Gardenhire EdD RRT FAARC Atlanta, GA

Content Category: AAC

RC Pharmacology continues to change. Many respiratory therapists may be unaware of the changes that exist in medications used today. The lecture will discuss additions and deletions of agents used in respiratory care. The presenter will discuss the many agents that are no longer in use and provide an update of newer medications.

Aerosol Delivery via High Flow Nasal Cannula for Adult and Pediatric Patients

11:10 AM - 11:45 AM

Jie Li MSc RRT, Forest Park IL

Content Category: AAC

Aerosol delivery via high flow nasal cannula has gained popularity in recent years. This lecture will review the clinical evidence for this relatively new delivery route and explain the influential factors that impact aerosol deposition.


Meena Khan


Joel Brown


Jeffrey Davis


Dana Evans


Cheryl Hoerr


Douglas Gardenhire


Jie Li

Sepsis Diagnosis and Management: Considerations for the Respiratory Therapist

11:50 AM - 12:25 PM

Robert Balk MD, Chicago IL

Content Category: AAC

Attendees will learn the role of respiratory therapy in the diagnosis and management of sepsis and septic shock. The presenter will specifically address the RT's role in finding septic patients, providing adequate respiratory/ventilator support, and assessment of adherence to bundles of care.

PRO/CON: High Frequency Percussive Ventilation is a Reliable Treatment for Refractory Hypoxemia

11:50 AM - 12:25 PM

PRO: Felix Khusid RRT FAARC, Brooklyn NY

CON: Rich Branson MS RRT FAARC, Beaufort SC

Content Category: AAC

The use of devices for rescue of patients who fail conventional ventilation continues to be a matter of debate. Are all high frequency ventilation devices similar or does the creation of the flow, volume, and pressure waveforms make a substantial difference in physiological response? This presentation will examine the evidence to support or refute the use of Volumetric Diffusive Respiration / High Frequency Percussive Ventilation in the critical care environment.

The Essential Role of RTs in Eliminating Preventable In-Hospital Deaths

11:50 AM - 12:25 PM

Stephen Dickson MS RRT RRT-NPS, Lawrenville GA

Content Category: PTS

Respiratory rate is the most under-valued and under-appreciated of all vital signs. The assessment of respiratory rate in general care is notoriously inaccurate. As the earliest indicator of deterioration, the importance of accuracy in respiratory assessment is critical. RTs are uniquely positioned to raise awareness and provide education to address this vital need.

Patient Safety: We Can't Fix It Unless You Tell Us It's Broken – Using the FDA's MedWatch Program

11:50 AM - 12:25 PM

Bradley Kuch MHA RRT FAARC, Havertown PA

Content Category: MGT

Advancing the cause of Patient Safety is every Respiratory Therapist's responsibility. Practitioners are doomed to make the same mistakes unless adverse events are reported, and pharmaceutical and device manufacturers cannot improve their products unless they are made aware of problems. Through case scenarios, this session will provide attendees with a working knowledge of what constitutes an AE, SAE, a Medication and/or Device error, and how to report events via the FDA MedWatch Program.

Robert Balk

Felix Khusid

Richard Branson

Stephen Dickson

Bradley Kuch

Alzheimer's Disease, Dementia, and Sleep Apnea: How Do We Treat?

11:50 AM - 12:25 PM

Jessica Schweller MS RRT APRN-CNP, Worthington OH

Content Category: SDS

Comorbid Alzheimer's and dementia have been linked to OSA, but how do we treat these patients? With cognition being a deterrent to therapy, what options are available for these patients and what works best? This lecture will address boundaries to therapy and ways to overcome these boundaries in treating OSA in patients with cognitive impairment.

Open Forum® – Poster Discussions #11

Supported by an unrestricted educational grant from

monaghan

12:30 PM - 2:25 PM

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

Open Forum® – Poster Discussions #12

Supported by an unrestricted educational grant from

monaghan

12:30 PM - 2:25 PM

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

Jessica Schweller

Sleep Section Meeting

1:00 PM - 1:45 PM

Jessica Schweller MS RRT APRN-CNP

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

Open Forum® Symposia
sponsored by
monaghan

Clinicians present the results of their scientific studies. Abstracts with a similar focus are clustered into a symposium to encourage discussions and interactions among investigators and observers; posters expand the information presented. 14 **Open Forum** Symposia will be presented during the 3½ days of AARC Congress 2019.

(Symposium)
All About Asynchrony
1:45 PM – 00:25 PM

▶The Clinical Impact of Patient-Ventilator Asynchrony
1:45 PM - 3:40 PM

Thomas Piraino RRT, Beamsville Ontario

Content Category: AAC

Asynchrony between the patient and ventilator is common in the intensive care unit. Increasing data demonstrates the impact asynchrony has on important patient outcomes. This lecture will describe the most common forms of asynchrony in the ICU and the impact this has on clinical outcomes.

▶Can Asynchrony Be Detected Automatically?
2:25 PM - 3:00 PM

Luis Felipe Damiani MSc PhDc PT, Santiago

Content Category: AAC

The largest issue with asynchrony is that it doesn't always occur when a clinician is at the bedside to see it. This lecture will discuss software that automatically detects various forms of asynchrony and the importance of this technology in everyday practice.

▶Is Extracorporeal Life Support the Ultimate Solution for Patient-Ventilator Asynchrony?
3:05 PM - 3:40 PM

Keith Lamb RRT FAARC FCCM, Warrentown VA

Content Category: AAC

Patient-ventilator asynchrony is often a result of increased drive due to chemoreceptors sensitive to values of carbon dioxide, pH, and oxygen. Can ECLS be used to prevent asynchrony, or completely eliminate the need for mechanical ventilation? This lecture will discuss the role of ECLS in the management of patient-ventilator asynchrony.

(Symposium)
Position for Long-Term Nicotine Cessation Success
1:45 PM – 2:25 PM

▶Tobacco Cessation Counseling
1:45 PM - 2:20 PM

Susan Rinaldo Gallo MEd CTTS FAACP, Raleigh NC

Content Category: CLP

Tobacco cessation interventions alone may not help the tobacco user quit. Many studies have identified that purposeful counseling by a qualified clinician – such as a respiratory therapist – can make a significant difference in the success of the quit attempt. This session will discuss the components of tobacco cessation counseling and how the respiratory therapist can dramatically and positively impact the quit attempt.

▶Brief Interventions for RTs to Treat Tobacco Use
2:25 PM - 3:00 PM

Michelle Earl BS RRT CTTS, Grand Forks ND

Content Category: CLP

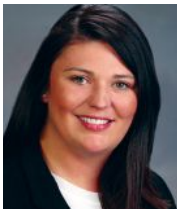
Tobacco use remains the leading cause of preventable mortality in the United States and its health consequences are seen every day in respiratory care. In this session we will review tobacco products and their effects on health; describe how respiratory therapists can successfully address tobacco use through the example of Altru Health; and summarize strategies and recommendations for developing, implementing, and maintaining a Tobacco Treatment Program in a clinical setting.


Thomas Piraino


Luis Felipe Damiani


Keith Lamb


Susan Rinaldo Gallo


Michelle Earl

▶Nicotine Cessation Through the Lens of Addiction
3:05 PM - 3:40 PM

Georgianna Sergakis PhD RRT FAARC, Columbus OH

Content Category: CLP

Respiratory therapists frequently witness the dangers of nicotine addiction through caring for people with cigarette-smoking related diseases. RTs can draw upon those stories and experiences to shape future patient education interactions. With electronic nicotine delivery systems (ENDS) gaining popularity, the conversation must shift from tobacco to nicotine cessation, centering addiction over the interface.

(Symposium)
Safety Everywhere You Go
1:45 PM – 3:40 PM

▶It Could Happen Anywhere: Active Shooter Preparedness in the Health Care Setting
1:45 PM - 2:20 PM

Jennifer Watts RRT RRT-NPS C-NPT, Romeoville IL

Content Category: PTS

The hospital setting has historically appeared to be a safe haven. Over the past months, it has been shown that fear and uncertainty may arise out of nowhere as the result of an active shooter. This presentation will share with the learner how to identify the signs of a potentially volatile situation.

▶Campus Safety: Preparing a Safety Plan for Students and Faculty
2:25 PM - 3:00 PM

Douglas Gardenhire EdD RRT FAARC Atlanta, GA

Content Category: PTS

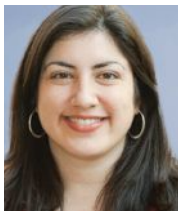
Campus safety continues to be an issue in the US. This lecture will discuss faculty and administrative components related to department and classroom safety. The presenter will discuss developing safety goals for the department and classroom, developing emergency response plans, and the implementation of the plans.

▶Identifying Unsafe Situations in the Patient's Home
3:05 PM - 3:40 PM

Kimberly Wiles BS RRT FAARC, Kittanning PA

Content Category: PTS

Unsafe situations can occur in many different locations. One location we don't always consider is in the patient's home. This presentation will identify various unsafe conditions and how they can be prevented or solved!


Georgianna Sergakis


Jennifer Watts


Douglas Gardenhire


Kimberly Wiles

Content Categories

AAC	—	Adult Acute Care
CLP	—	Clinical Practice
EDU	—	Education
ETH	—	Ethics
MGT	—	Management
NPS	—	Neonatal/Pediatrics
PFT	—	Pulmonary Function
PTS	—	Patient Safety
SDS	—	Sleep Medicine

Pediatric ARDS: Outcomes Are Improving, but How and Why?
1:45 PM - 2:20 PM

Ira Cheifetz MD FAARC, Durham NC

Content Category: NPS

Survival for pediatric acute respiratory distress syndrome has steadily improved over time, but why and how? The answer to this seemingly simple question is complex as there have been no definitive studies that correlate an intervention with improved outcome. This presentation will review the available data and discuss potential explanations for this positive outcome trend. Considerations for the future will be explored.

Managing Sleep Apnea for Commercial Drivers
1:45 PM - 2:20 PM

Kevin Dator BS RRT RPSGT, Moreno Valley CA

Content Category: SDS

This will be an updated discussion in managing commercial drivers who have been diagnosed with Obstructive Sleep Apnea. This discussion will include the use of oral appliance therapy with compliance monitoring.

False Negative Tests: When "Normal" PFTs Are Wrong
1:45 PM - 2:20 PM

Jeffrey Haynes RRT RPFT FAARC, Pembroke NH

Content Category: PFT

A normal PFT is usually relied upon to exclude lung disease, but are PFTs always right? This presentation will show the limitations of PFTs and review specific instances when normal PFTs can hide disease.

Mechanical Ventilation Strategies During Extra Corporeal Membrane Oxygenation
1:45 PM - 2:20 PM

Keith Lamb RRT FAARC FCCM, Warrenton VA

Content Category: AAC

This presentation will discuss the criteria for ECMO cannulation and the mechanical ventilation management strategies during ECMO.

The High Cost of Team Member "Violence" and Collateral Damage
1:45 PM - 2:20 PM

Kevin McQueen MPA RRT RRT-ACCS, Colorado Springs CO

Content Category: MGT

High-functioning teams are grounded in mutual respect, personal accountability, and trust. How is a team disrupted when one member elevates self over team success? Join the presenter as he provides clear ways to identify "disrupters" and explains the high cost to team reputation these individuals cause. Solutions for moving your team from disruptive collateral damage to productivity will be presented.


Ira Cheifetz


Jeffrey Haynes


Keith Lamb


Kevin McQueen

Monday, November 11

AARC CONGRESS 2019

The 65th International Respiratory Convention & Exhibition

What Millennials Really Want From Their Manager
2:25 PM - 3:00 PM

Joel Brown BS RRT FAARC, Oxford PA

Content Category: MGT

By the year 2025, more than 75% of our workforce will be millennials. On the other hand, today's managers have difficulty figuring out how to keep them engaged and prepare them to become the leaders of the future. This lecture will provide insight on these challenges from the perspective of a millennial on the ladder to leadership and an established respiratory care director.

Ventilatory Management of the Morbidly Obese Patient
2:25 PM - 3:00 PM

John Davies MA RRT FAARC, Cary NC

Content Category: AAC

Ventilatory management of the morbidly obese patient poses significant challenges for the respiratory therapist. In most instances, higher than normal ventilatory pressures are required to achieve the desired tidal volume. However, these pressures may, in fact, be safe and acceptable. This lecture will examine the challenges of ventilating the morbidly obese patient and discuss evidence-based strategies to effectively ventilate this type of patient.

ATS/ERS Spirometry Guidelines: Strengths, Weaknesses, and Omissions
2:25 PM - 3:00 PM

Jeffrey Haynes RRT RPFT FAARC, Pembroke NH

Content Category: PFT

Spirometry guidelines have great influence on clinical testing, but are they perfect? This presentation will review the strengths, weaknesses, and omissions of the ATS/ERS spirometry guidelines.

Utilizing RTs as Complex Case Managers in Sleep
2:25 PM - 3:00 PM

Rose Huston RRT, Orange CA

Content Category: SDS

This lecture will discuss case management of respiratory failure and hypoventilation patients within the Sleep Center. The presenter will also discuss pathophysiology and phenotypes that would require noninvasive ventilation (APAP with O2, BIPAP, AVAPS) such as COPD with OSA, neuromuscular disease, OHS, and respiratory failure patients. This lecture will discuss therapy options as determined through PSG, long term management, and modem data through case studies.

Joel Brown

John Davies

Exhibit Hall Hours:

Saturday, Nov. 9, 10:30 am – 4:00 pm
Sunday, Nov. 10, 9:30 am – 3:00 pm
Monday, Nov. 11, 9:30 am – 2:00 pm

Tidal Volume Selection in Pediatric Patients
2:25 PM - 3:00 PM

Christopher Newth MD, Los Angeles CA

Content Category: NPS
Tidal volume selection can have a large impact on the development of lung injury. While adult tidal volume selection is often made based upon predicted body weight, measured body weight is commonly used in children. The presenter will discuss the current knowledge related to tidal volume selection in pediatric patients.

(Symposium) Pediatric Pulmonary Function Testing
3:05 PM – 5:00 PM

Lung Clearance Index Across the Ages
3:05 PM - 3:40 PM

Paolo (Paul) Pianosi MD FRCPc, Rochester MN

Content Category: PFT
Lung clearance index or multiple-breath washout (MBW) offers insight into pediatric lung function, specifically in obstructive disease, that may not be available through spirometry or resistance measurements. Technical and test methodology considerations in this population will be discussed.

▶Lung Clearance Index Test in Cystic Fibrosis
3:45 PM - 4:20 PM

Paolo (Paul) Pianosi MD FRCPc, Rochester MN

Content Category: PFT
Lung clearance index or multiple-breath washout (MBW) has become an important lung function test in the assessment of cystic fibrosis and clinical research when combined with spirometry. The assessment of CF, application to the severity of the disease, relationship to therapeutic interventions, and safety evaluation in new therapies will be discussed

An Update on Pediatric Pulmonary Function Standards: What's New?
4:25 PM - 5:00 PM

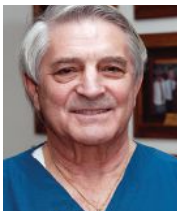
Susan Blonshine RRT AE-C RPFT, Mason MI

Content Category: PFT
Multiple new standards from the ATS and ERS have been published that concentrate on test methods in the pediatric population. Each of these will be discussed and their impact on PF Lab practice.

Traumatic Brain Injury: Respiratory Care Considerations
3:05 PM - 3:40 PM

Edna Lee Warnecke RRT RRT-NPS RRT-ACCS, Kensington CA

Content Category: AAC
Traumatic brain injury (TBI) causes significant morbidity and mortality. Secondary insults such as hypoxia and hypotension are known to result in worse physical and cognitive outcomes. Additionally, the speaker will argue that hyperventilation with its reduction in cerebral blood flow is similar. The latest TBI guidelines as they relate to hypoxia, hypotension, and hyperventilation will be discussed as participants learn appropriate therapy to limit morbidity and mortality of patients with TBI.


Christopher Newth


Paolo Pianosi


Susan Blonshine

(Symposium)
Sleep Disorders Among the Inpatient Population
3:05 PM – 4:20 PM

▶Sleep Disordered Breathing Management in the Bariatric Population
3:05 PM - 3:40 PM

Jessica Schweller MS RRT APRN-CNP, Worthington OH

Content Category: SDS
This lecture will focus on the many aspects of treatment when managing sleep disordered breathing in the bariatric population. This lecture will address the challenges faced with diagnosis and treatment of the obese patient, when to change to bilevel, and when to suspect obesity hypoventilation syndrome. The talk will also address the modalities of treatment that should be avoided in this population and when and how surgery can impact their treatment plan.

▶Sleep Apnea and the Hospital Patient
3:45 PM - 4:20 PM

Jessica Schweller MS RRT APRN-CNP

Content Category: SDS
This lecture will address the prevalence of sleep disordered breathing among patients admitted to the hospital and how to screen and diagnose them at discharge. It will also discuss treatment of patients already diagnosed with sleep apnea and how to manage home PAP units while in the hospital. This lecture is intended for RTs in the inpatient setting.

Short Staffed? Add Value!
3:05 PM - 3:40 PM

Greg Morgan MBA RRT CPFT, North Branch MN

Content Category: MGT
If your department is struggling to have enough staff, practical suggestions to increase the value of the services offered will be presented. "Value" can be appreciated through efficiency, patient care, patient education, and follow up. The presenter will share unique ideas of what you might employ to gain "buy in" from staff and senior leadership.

Airway Management: Lessons Learned from a Global Perspective
3:05 PM - 3:40 PM

Natalie Napolitano MPH RRT FAARC, Philadelphia PA

Content Category: NPS
Utilizing knowledge gained from the NEAR4kids database, the presenter will detail lessons learned from an international data pool detailing intubation events and associated sequelae.

Open Forum® – Poster Discussions #13
Supported by an unrestricted educational grant from

monaghan

3:10 PM - 5:05 PM

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


Jessica Schweller


Greg Morgan


Natalie Napolitano

Open Forum® – Poster Discussions #14

Supported by an unrestricted educational grant from

monaghan

3:10 PM - 5:05 PM

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

(Symposium)
American Heart Association Guidelines Update

3:45 PM – 5:00 PM

▶Advanced Cardiac Life Support: An AHA Update

3:45 PM - 4:20 PM

Brian Walsh PhD RRT RRT-NPS, Lynchburg VA

Content Category: AAC

The science related to Advanced Cardiac Life Support (ACLS) changes often. For this reason, the American Heart Association provides regular updates to the guidelines. This presentation will review recent guideline updates and discuss the proposed 2020 updates.

▶Pediatric Advanced Life Support: An AHA Update

4:25 PM - 5:00 PM

Robert Sutton MD MSCE, Garnet Valley PA

Content Category: NPS

The science related to Pediatric Advanced Life Support (PALS) changes often. For this reason, the American Heart Association provides regular updates to the guidelines. This presentation will review recent guideline updates and discuss the proposed 2020 updates.

PRO/CON: NIV vs. HFNC for Hypoxemic Respiratory Failure NIV Is Superior

3:45 PM - 5:00 PM

PRO: Robert Kacmarek PhD RRT FAARC, Littleton MA

CON: Dean Hess PhD RRT FAARC, Boston MA

Content Category: AAC

A patient presenting with hypoxemic respiratory failure requiring oxygen therapy, and perhaps positive pressure support, represents a challenge for the care team. Before intubation and its attendant consequences, both HFNC and NIV can be used to stabilize the patient and prevent intubation. Can HFNC provide sufficient pressure to recruit alveoli? Does NIV have consequences for comfort and cardiovascular function? Clearly NIV is superior...or is it?

Brian Walsh

Robert Sutton

Robert Kacmarek

Dean Hess

(Symposium)
Providing Inclusive Health Care
3:45 PM – 5:00 PM

▶Diversity and Inclusion: How to Do It Right!
3:45 PM - 4:20 PM

Gabrielle Davis MPH RRT CHES, Boise ID

Content Category: MGT

Diversity and inclusion are the latest buzzwords used in academia and health care to depict safe and welcoming environments. They are found throughout mission and vision statements, course syllabi, websites, and student handbooks all over the country. These terms are often used interchangeably, though their meanings are quite different. This presentation will highlight the true meaning of diversity and inclusion and how they are equally important in the academic and health care settings.

▶Providing a Safe(r) Space for LGBTQ+ Patients, Students, and Staff
4:25 PM - 5:00 PM

Samantha Davis MS RRT CHSE, Boise ID

Content Category: MGT

When navigating an institution as a part of a marginalized group, safe(r) spaces allow individuals to participate, work, learn, receive care, and grow more effectively. Within the LGBTQ+ community, the scarcity of these spaces may create additional barriers for patients, students, or professionals to thrive. This session will discuss strategies for providing safe(r) spaces to individuals in the classroom and clinical settings.

Optimizing Mechanical Ventilation: Human Thought or Computer Algorithm?
3:45 PM - 4:20 PM

Ira Cheifetz MD FAARC, Durham NC

Content Category: NPS

Can mechanical ventilation be best optimized by reliance on computer algorithms, individual human thought, or a combination of both? While computer algorithms can standardize care and employ the most updated data, human thought allows individualization to specific patient conditions and includes the intangible concept of the "art of medicine." This presentation will review the available data and provoke thought and discussion on this increasingly important and controversial topic.

Electronic Vaping Devices: Educating Our Patients and Community
3:45 PM - 4:20 PM

Mary Martinasek PhD RRT AE-C, Tampa FL

Content Category: CLP

This talk will focus on understanding current literature on vaping devices for both those individuals trying to quit smoking and youth and young adults who are nicotine naive.


Gabrielle Davis


Samantha Davis


Ira Cheifetz


Mary Martinasek

What Should I Know About Esophageal Pressure Monitoring for Mechanical Ventilation?

3:45 PM - 4:20 PM

Eduardo Mireles-Cabodevila MD, Cleveland Heights OH

Content Category: AAC

Esophageal manometry has been shown to be useful for more than 50 years of research. This talk will describe the why, when, and how of monitoring esophageal pressure and using transpulmonary pressure to optimize ventilator settings.

Cardiorespiratory Interactions: The Heart-Lung Connection

4:25 PM - 5:00 PM

Kimberly Jackson MD, Durhan NC

Content Category: NPS

The heart and lungs are both anatomically and physiologically connected. Mechanical ventilation can both help and harm cardiac output. This presentation will explore the physiological relationship between the cardiovascular and pulmonary systems with a focus on strategies to manage mechanical ventilation to optimize cardiac function.

Fighting the Battle Against Hemoptysis

4:25 PM - 5:00 PM

Prema Nanavaty MD, Chicago IL

Content Category: AAC

This lecture will describe the various causes, available treatments, and the role the respiratory therapist plays in the treatment of patients with hemoptysis.

RTs Revolutionizing CPAP Adherence: How Technology Is Improving Outcomes

4:25 PM - 5:00 PM

Heidel Trinidad MBA RRT AE-C, Fontana CA

Felonda Parker BHS RRT RRT-SDS, Fontana CA

Content Category: SDS

Population health management, real-time monitoring, predictive analytics, and artificial intelligence: these "buzz words" describe not only future health care trends but current tools being used to transform sleep medicine. Dependence on technology in daily life drives consumer electronics to become the perfect resource in the integration of health care. We will discuss interactive communication between the CPAP user, consumer electronics, and the clinician.

Mechanical Ventilation Alarm Safety

4:25 PM - 5:00 PM

Brady Scott MSEd RRT FAACP, Wheaton IL

Content Category: PTS

Alarm fatigue continues to be a national patient safety concern and not all mechanical ventilation alarms provide actionable information. This presentation will discuss issues with mechanical ventilation alarm settings and potential negative consequences, including alarm fatigue.

Sputum Bowl Finals and Reception

5:30 PM - 7:30 PM

Eduardo Mireles-Cabodevila

Kimberly Jackson

Prema Nanavaty

Heidel Trinidad

Brady Scott

Tuesday

35th Phil Kittredge Memorial Lecture

Shelly Mishoe PhD RRT FAARC, Virginia Beach VA

Closing the Gap: Improving Critical Thinking Skills for the Respiratory Therapist

8:00 AM - 8:50 AM

Content Category: EDU

Several publications indicate that critical thinking is an integral part of the delivery of health care. This would suggest that fostering the development of critical thinking skills is a vital component of preparing RTs for the health care of today and the future. However, we know very little about critical thinking in the context of respiratory care as it's not an area that has been thoroughly studied. This presentation will discuss the core components of fostering critical thinking skills in formal education and at the bedside from one of the few recognized experts in the field.

RESPIRATORY CARE

Journal Symposium

9:15 am – 12:30 pm

▶Five Best Original Papers in Respiratory Care

9:15 AM - 9:50 AM

Richard Branson MS RRT FAARC, Beaufort SC

Content Category: CLP

Respiratory Care publishes over 200 papers per year. What are the most influential papers published in 2019 that clinicians should understand? These papers question old ideas and suggest alterations to practice.

▶Most Common Mistakes by New Authors

9:55 AM - 10:30 AM

Dean Hess PhD RRT FAARC, Danvers MA

Content Category: CLP

How do I create a paper that has the best chance of being accepted? What are the most common mistakes made by new authors that preclude acceptance of their paper? What are checklists and practices that improve the probability of getting your paper accepted.

▶Creating a Successful Research Program in Your Department

10:35 AM - 11:10 AM

Rich Kallet MSc RRT FAACP, San Francisco, CA

Content Category: CLP

Research requires expertise and time to be successful. How can a respiratory therapy department create a culture that prioritizes research? What infrastructure is required and how important are mentors?

▶Simulation Studies for Publication – Principles and Pitfalls

11:15 AM - 11:50 AM

Robert Chatburn RRT RRT-NPS MHHS, Cleveland OH

Content Category: CLP

Simulation can be used for education and research. However, simulation research is a science to itself. What are the best practices and what are the pitfalls of simulation research?

▶Five Best Bench Studies in Respiratory Care

11:55 AM - 12:30 PM

Richard Branson MS RRT FAARC, Beaufort SC

Content Category: CLP

Bench studies of technology represent a focus of Respiratory Care. This lecture will describe the 5 top bench studies of technology and list the characteristics of exceptional studies.

Rich Branson

Dean R Hess

Rich Kallet

Rob Chatburn

(Symposium)
Teaching the Tough Stuff: Preparing for Real World Practice

▶GRIT: Growth, Resilience, Interpersonal Communication & Teamwork
9:15 AM - 9:50 AM

Georgianna Sergakis PhD RRT FAARC, Columbus OH

Content Category: EDU

This interactive session will explore the core traits and related literature on the development of GRIT (growth mindset, resiliency, interpersonal communication and teamwork) in clinical training. We will discuss how to develop strategies to improve the learners' critical thinking skills by questioning their own assumptions and practicing for real world application.

▶Too Soon? Navigating Tough Topics with Student Learners
9:55 AM - 10:30 AM

Samantha Davis MS RRT CHSE, Boise ID

Content Category: EDU

This session will explore different instructional approaches for integrating the tough topics, such as resiliency, compassion fatigue, hospice, and palliative care into your own curriculum. Audience dialogue and sharing of current practices will be encouraged.

▶Out of Our Comfort Zone: Conversations About Comfort
10:35 AM - 11:10 AM

Shawna Strickland PhD RRT FAARC, Irving TX

Content Category: EDU

Many clinicians feel uncomfortable discussing palliative efforts and end-of-life options and most have no formal training in these conversations. Role-playing and simulation can be helpful to practice these difficult conversations and help refine approaches to conversations with patients and families.

▶What About Us? An Exploration of Self-Care and Compassion Fatigue
11:15 AM - 11:50 AM

Gabrielle Davis MPH RRT CHES, Boise ID

Content Category: EDU

This session will explore compassion fatigue and how lack of self-care can affect our interactions with patients, students, colleagues, and life outside of work.

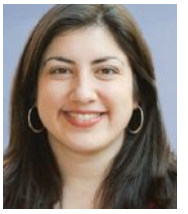
PRO/CON: Racing to Extubation: Should All Pediatric Post-Operative Congenital Heart Patients Be in the Race
9:15 AM - 10:30 AM

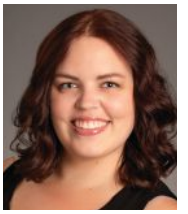
PRO: Teresa Volsko MBA RRT FAARC, Canfield OH

CON: Katherine Fedor MBA RRT RRT-NPS, Cleveland OH

Content Category: NPS

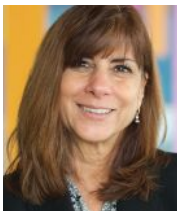
There is increasing interest in reducing the duration of mechanical ventilation after surgery for pediatric congenital cardiac defects. However, the contemporary use of an early extubation strategy and its effect on clinical outcomes is poorly understood. Two clinicians will debate the benefits and risks of such an approach. Should a fast track weaning protocol be used on all intubated children following surgical correction of a congenital cardiac defect?

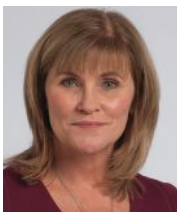

Georgianna Sergakis


Samantha Davis


Shawna Strickland


Gabrielle Davis


Teresa Volsko


Katherine Fedor

Acute Pulmonary Embolism in Adults
9:15 AM - 9:50 AM

Neil MacIntyre MD FAARC, Durham NC

Content Category: AAC
Respiratory therapists frequently encounter patients that are suffering from PE. Because PE can be dangerous, even fatal, it is imperative that it is recognized and treated quickly. In this lecture the presentation, evaluation, and treatment of PE will be discussed.

Designing Evidence-Based Protocols for Use in the Intensive Care Unit
9:15 AM - 9:50 AM

Eduardo Mireles-Cabodevila MD, Cleveland Heights OH

Content Category: AAC
This talk shares the practical experience of a director of a medical intensive care unit in a large academic medical center in designing and implementing respiratory care protocols. It will emphasize how to find, evaluate, and incorporate the latest evidence.

Standardizing Respiratory Therapy Terms to Measure Patient Outcomes and Value of Respiratory Therapy Practice
9:15 AM - 9:50 AM

Constance Mussa PhD RRT RRT-NPS, Forest Park IL

Content Category: MGT
Currently, due to a lack of standardized terminology, respiratory care data are seldom captured and aggregated in health information systems to help us generate meaningful information, link respiratory care interventions and outcomes, and evaluate the cost-effectiveness of care. This session will describe work that is currently underway to label and define key respiratory care concepts that describe patient responses to respiratory system dysfunction, events, and interventions.

Secrets to Creating a Dynamic Team Amid Organizational Change!
9:55 AM - 10:30 AM

Steven Abplanalp RRT CPFT, Murray UT

Content Category: MGT
Success in the constantly changing health care environment depends upon strong "teaming." Creating an environment where employees feel safe to take professional risks, learn from experience, and then grow new ideas into opportunities enables them to reach their highest potential. Strong leadership teams that are dynamic, flexible, and organized to learn make a positive difference for every patient, every day while they revolutionize the health care workplace.

Family ICU Syndrome: What It Is and What an RT Can Do About It
9:55 AM - 10:30 AM

Deborah Linehan RRT RRT-NPS RRT-ACCS, Littlestown, PA

Content Category: CLP
A devastated family at the bedside of a loved one: we see this all the time as respiratory therapists, but have you ever stopped to consider the psychological issues confronting this family, and how it affects them? These effects can be felt long after their loved one has left the ICU. In this lecture, Family ICU Syndrome and practical ways respiratory therapists can help the families in their care will be discussed.


Neil MacIntyre


Eduardo Mireles-Cabodevilla


Constance Mussa


Steven Abplanalp


Deborah Linehan

PRO/CON: VV-ECMO Should be Considered a First-Line Treatment for Severe ARDS

9:55 AM - 10:30 AM

PRO: Maria Madden MS RRT RRT-ACCS, Baltimore MD

CON: Karsten Roberts MSc RRT RRT-ACCS, Philadelphia PA

Content Category: AAC

In recent years, VV-ECMO has been utilized as a salvage therapy in severe ARDS. Since techniques and technology have improved, should it now be used as a first-line therapy when conventional mechanical ventilation has failed? During this session, two clinicians will debate the evidence that supports or refutes the use of ECMO as a first-line treatment for severe ARDS.

Departmental Research and QI Implementation on a Limited Budget

10:35 AM - 11:10 AM

Dave Crotwell RRT RRT-NPS FAARC, Kirkland WA

Content Category: MGT

Leaders theoretically know that having research and/or a formal QI program within respiratory care departments is ideal. However, implementing them can prove daunting. How do you put a program together with a limited budget? Join the presenter as he shares some practical steps to implementation success.

AARC CONGRESS 2019
The 65th International Respiratory Convention & Exhibition

Case Studies in Palliative Care

10:35 AM - 11:10 AM

Allen Gustin Jr MD FCCP, Maywood IL

Content Category: ETH

Respiratory therapists may be uncomfortable with their role in assessing for and engaging in palliative care measures. This presentation will focus on appropriate engagement by the respiratory therapist as presented in various case studies.

A Look Inside the Lungs: Electrical Impedance Tomography

10:35 AM - 11:10 AM

Daniel Rowley MS RRT FAARC, Charlottesville VA

Content Category: AAC

Electrical impedance tomography (EIT) is an emerging bedside monitoring technique that does not produce radiation. It provides real-time dynamic image and numeric data that may be used to rapidly assess for regional lung volume changes. This lecture will provide an overview of this new technology and emerging evidence to support its use.

Putting the Pressure on Pediatric High Flow Nasal Cannula

10:35 AM - 11:10 AM

Ryan Sharkey MSc RRT RRT-NPS, Charlottesville VA

Content Category: NPS

High flow nasal cannula is a popular noninvasive therapy in pediatric patients. The pressure delivered during HFNC is difficult to measure and highly variable. These challenges in HFNC delivery can lead to misunderstanding of pressure delivered to the patients. This presentation will review current data on pressure delivery and variables that affect pressure with pediatric HFNC.


Maria Madden


Karsten Roberts


Dave Crotwell


Allen Gustin


Daniel Rowley


Ryan Sharkey

Unplanned Extubations in the NICU: Are There Gaps in Care, Devices, or Processes?

11:15 AM - 11:50 AM

Kathleen Deakins MHA RRT FAARC, Chardon OH

Content Category: NPS

Unplanned extubations in the Neonatal ICU continues to plague this most vulnerable subset of patients. Causes of unintended extubation are variable from institution to institution. This review is intended to identify the most common areas that need attention and potential solutions to standardizing care of neonates.

(Symposium) Ventilator Waveforms: Interpretation and Clinical Application

▶Interpretation of Basic Scalars and Loops

11:15 AM - 11:50 AM

Ruben Restrepo MD RRT FAARC, Boerne TX

Content Category: AAC

Recognizing how ventilator waveforms are displayed is critical to understand patient-ventilator interactions and to optimize the management of patients undergoing invasive mechanical ventilation. This interactive (audience-response) presentation is designed to explain the foundational concepts behind every graphic displayed on the ventilator screen.

▶What in the World? Graphic Interpretation Cases

11:55 AM - 12:30 PM

John Davies MA RRT FAARC, Cary NC

Content Category: AAC

This is a case-based presentation, with audience participation, that focuses on graphical waveform interpretation, identification of patient-ventilator synchrony, and recognition of modes of ventilation. The audience can test their knowledge of waveform interpretation.

Agency Update

11:15 AM - 12:30 PM

Karen Schell DHSc RRT RRT-NPS RPFT/*AARC President*

Michael Amato MBA/*ARCF Chair*

Katherine Fedor MBA RRT RRT-NPS/ *NBRC President*

Allen Gustin Jr MD FCCP/ *CoARC President*

The leadership of the AARC, ARCF, CoARC, and NBRC will present the most updated information affecting the profession, research, accreditation, and credentialing. This is a must-attend session in your agenda!


Kathleen Deakins


Ruben Restrepo


John Davies


Karen Schell


Michael Amato


Katherine Fedor

Coaching, Development, and Performance: Managing Isn't Always Leadership

11:15 AM - 11:50 AM

Matthew Pavlichko MS RRT RRT-NPS, Myerstown PA

Content Category: MGT

The strength of every respiratory department is its people. Employee engagement and development sometimes takes a back seat to budget, schedules, and equipment issues. Respiratory care departments spend 70-80% of their budgets on salaries, but do leaders spend 70-80% of their time with their team? This lecture will describe how we can be better leaders by making development a priority. It will also discuss how individual development plans are not just for problem employees.

Making Pediatric Intubation Safer: Implementation of an Airway Safety Bundle

11:55 AM - 12:30 PM

Natalie Napolitano MPH RRT FAARC, Philadelphia PA

Content Category: NPS

Tracheal intubation is associated with significant complications, including hypotension and cardiac arrest. Risk can be significantly reduced with the implementation of an airway safety bundle. This presentation will review the patient, clinician, and practice factors associated with risk reduction and discuss the process for implementing the bundle.

EMR: Ongoing Success Post-Implementation IS Possible

11:55 AM - 12:30 PM

Larae Sams MBA RRT, Wesley Chapel FL

Content Category: MGT

Developing a new electronic medical record (EMR) or transitioning to a new EMR platform can be challenging and stressful for the respiratory therapy department. However, there are strategies for ensuring the respiratory therapy department is well-represented in the development phase. This presenter will identify development challenges and opportunities pertinent to the respiratory therapy manager during the pre-go-live phase of installing an EMR as well as assuring ongoing success.

The Earth is Not Flat, So Why Is Your Imaging? Clinical Application of 3D Modeling

11:55 AM - 12:30 PM

Ryan Sharkey MSc RRT RRT-NPS, Charlottesville VA

Content Category: EDU

Does your radiographic imaging feel too plain? 3D images and augmented reality are becoming popular education modalities. 3D imaging can help respiratory therapists visualize and teach abnormalities of the respiratory system. Open-source software and applications used to create 3D images will be introduced and augmented reality tools will be covered in this presentation with techniques, from basic to advanced, to create your own 3D models.

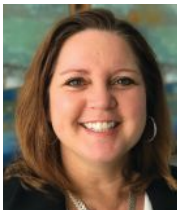
Closing Ceremony

12:45 PM - 2:15 PM

TBA

Matthew Pavlichko

Natalie Napolitano



Larae Sams

Ryan Sharkey

WIN PRIZES with the AARC Passport Game!

Download the AARC Mobile App to play the AARC Passport Game during Congress 2019. Collect points to win by posting pictures, scanning QR codes, evaluating sessions and more. Winners will be announced by tweet and app notification. Play for a chance to win a Grand Prize!

To play:

- Go to EVENTS within the AARC app
- Find the MORE tab
- Select AARC PASSPORT GAME
- Start earning points to win!

RESPIRATORY CARE

Open Forum® Symposia

sponsored by

monaghan

Researches and clinicians present finding of studies on aerosol therapy, mechanical ventilation, neonatal and pediatric care, education, management, and every practice mode in our profession.

Accepted abstracts will be presented in one of 3 formats:

Editors' Choice

Saturday and Sunday
Nov 9–10
Display of Editors' Choice posters with top 10 abstracts in 2019.

Monday
Nov 11
Ten-minute slide presentations with slides by authors of Editors' Choice, each followed by 10-minute period of audience questions and discussion.

Poster Discussions

Saturday – Monday
Nov 9–11
Poster sessions grouped by topics. A brief oral presentation (no slides) and questions/discussion allow presenters to expand the work featured on the posters.

Posters Only

Sunday and Monday
Nov 10–11
Posters presented in sessions grouped by category, different every day.

Exhibitors as of 8/2/19

A

AARC
Aerogen
Airgas Healthcare
Airon Corporation
Alpha-1 Foundation
American College of Chest Physicians (CHEST)
Analytical Industries, Inc
Aureus Medical Group
Avanos Medical

B

B&B Medical Technologies
Baitella AG
Bay Corporation
Beyond Air, Inc. (formerly AIT Therapeutics, Inc.)
Bio-Med Devices Inc.
Biovo Technologies (Formerly Airway Medix)
BJC Healthcare
Boehringer Ingelheim Pharmaceuticals, Inc.
Boehringer Laboratories, LLC
Breas Medical
Bunnell Incorporated

C

Cenorin
Children's Healthcare of Atlanta
Circassia Pharmaceuticals Inc
Commission on Accreditation For Respiratory Care (CoARC)
Cross Country Allied (formerly MSN Allied)

D

D R Burton
Dale Medical Products Inc.
Dartmouth-Hitchcock
Draeger Inc.

E

Electromed, Inc.
ELSEVIER
Emory Healthcare

F

Fisher & Paykel Healthcare Inc
Flexicare Inc.
FloSure Technologies LLC

G

Gaumard Scientific
GE Healthcare
GEICO
Goldstein & Associates Inc
Genentech
Genstar Technologies Co, Inc. (Gentec)
Getinge (formerly Maquet)
Grifols USA, LLC
GVS North America

H

Hamilton Medical Inc
Herzing University
Hillrom
Hollister Incorporated

I

IMT Analytics AG
IngMar Medical Ltd
Instrumentation Industries Inc
Instrumentation Laboratory
International Biomedical
Intersurgical, Inc

J

Jones & Bartlett Learning

K

Kettering National Seminars
Kootenai Health

L

Lee Health

M

Mallinckrodt Pharmaceuticals
MARPAC, Inc.
Masimo
Maxtec
Mayo Clinic
Medline Industries Inc
Medtronic
Mercury Medical
Methapharm
MGC Diagnostics
MicroVapor Devices
Mindray Bio-Medical Electronics
MIR - Medical International Research
Monaghan Medical Corporation
Morgan Scientific
Mylan Inc.

N

National Board For Respiratory Care (NBRC)
Neotech Products LLC
Nihon Kohden America Inc.
Nova Biomedical

O

Ohio Medical
Oxitone Medical Ltd.

P

Passy-Muir Inc
Percussionaire Corp
Perma Pure
Philips Healthcare
Pima Medical Institute
Praxair Healthcare Services
Precision Medical, Inc.
Pulmodyne
PulmOne Advanced Medical Devices, Ltd.

R

Radiometer America Inc.
ReddyPort
Respiralogics
RT/Sleep Review
Rush University Medical Center

S

Salter Labs
Sentec
Seoil Pacific Corp.
Siemens Healthineers
Smiths Medical
SunMed
Sunovion Pharmaceuticals

T

TELCOR Inc.
Teleflex
TRACOE medical GmbH
Trajecsys Corporation
Tri-anim Health Services
TSI, Inc.

U

UCLA Health
University of Chicago Medicine
University of Missouri

V

Vapotherm, Inc.
Ventec Life Systems
Verathon Medical
VibraPEP
VORTRAN Medical
Vyaire Medical

Z

ZOLL Medical Corporation

Registration and Fees

REGISTRATION FEES

Payment of appropriate 4 Days fee entitles registrant to attend all Congress 2019 official lectures, activities and social events November 9-12. Expenses for hotel, parking, meals and all other incidentals are not included and are the responsibility of the attendee.

Congress (4 Days)	Through Sept 9	After Sept 9 And On-site
AARC Member	$437	$495
AARC Senior Member	$125	$130
AARC Student Member	$50**	$90**
Non-member	$600*	$637*
Non-member Student	$600***	$637***
Guest	$75**	$80**

*You may become an AARC Member prior to registering (www.aarc.org). If you opt to pay the non-member Congress 4 days fee, you are entitled to a complimentary12-month AARC Digital Level membership. Memberships included in the non-member rate will be activated within 30 days after Congress 2019.

Congress Daily Fees (Must register on-site)	Saturday or Sunday or Monday	Tuesday
AARC Member	$237	$180
AARC Senior Member	$65	$50
AARC Student Member	$47**	$47**
Non-member	$367	$280
Non-Member Student	$367***	$280***
Guest	Not Available	Not Available

**Students and guests do not earn CRCE credit.

*** Non-member students can save on Congress registration fees by first joining the AARC then registering as an AARC Student Member. Otherwise, non-member students must pay the non-member registration rate. Visit www.AARC.org and click “Membership” for details. Students do not earn CRCE credits.

Active Duty Military

We have a special offer for all health care professionals, not just respiratory therapists, on active duty in all branches of the US armed forces, as well as military reservists recalled to active duty. A valid military email address is required.
Go to http://www.aarc.org/go/c19r/.

Congress Day Tripper Package

A cost-saving group rate is available for AARC members and non-members: four 1-day pre-paid vouchers for $717. See page 94 for complete details.

Terms & Conditions

PAYMENT

By credit card: American Express, MasterCard, VISA, and Discover are the only credit cards accepted. An email acknowledgement will be sent following the transaction confirming payment.

By check: Registration is not complete until check payment has been received. At the conclusion of the registration process, an email confirmation will be sent highlighting the details of your purchase. This email will double as your "invoice" should you need to submit documentation for the payment of your registration.

Submit check payment to:
AARC
c/o 7 Technology Park Drive
Bourne, MA 02532

Students: Non-Member students must provide valid, current student identification (e.g. student I.D. or transcript) during registration or higher registration fees will apply.

Promotions: By registering for this event, the registrant acknowledges that the AARC may offer future promotions which may yield lower registration fees than those paid in the current transaction. The registrant enters into this agreement knowing this risk and understands that should that happen, refunds will not be issued for the difference.

Cancellation Protection: Congress 2019 cancellation protection may be purchased for $37 at the time of registration only. Those purchasing this option may cancel for any reason and receive a 100% refund. Protection covers the total amount paid for AARC Congress 2019 registration fees, purchased pre-courses and/or meeting add-ons (e.g. Gold/Platinum/VIP Passes, drink tickets, etc.). Cancellation protection is not available for students. Registration and cancellation protection must be purchased together.

C**ancellation:** A written cancellation and refund request is required via e-mail. Emails must be dated no later than Monday, November 4, 2019 at 11:59 p.m. CST. No refund requests will be accepted after that date. Refunds will be processed after the meeting. Send request to aarc@xpressreg.net.

Unless cancellation protection is purchased, refunds will be equal to the total amount paid minus a $200 administrative fee. Cancellations by students will receive a refund minus a $25 administrative fee. Guest cancellations will receive a refund minus a $35 administrative fee. Fees will not be refunded for no-shows.

Substitution: Registration for those unable to attend may not be applied to a future year's meeting. Registration transfers are permitted with a paid administrative fee of $35. If the substitute is not an AARC member, payment of the difference between the member and non-member fees will also be required. Substitution requests must be submitted in writing Monday, November 4, 2019 at 11:59 p.m. CST and sent via email to aarc@xpressreg.net.

Badge Replacement: If an attendee misplaces or loses a badge once it is printed onsite, the registered individual must pay $25 to get a replacement badge.

Your Likeness and Personal Information: The AARC plans to take photographs and video, and reproduce them in educational, news or promotional material, whether in print, electronic or other media, including the AARC website. By participating in AARC Congress 2019 you grant the right to use your name or voice for such purposes to the AARC. All content becomes the property of the AARC. Content may be displayed, distributed or used by AARC for any association-related purpose.

AARC offers exhibitors the option to use lead retrieval technology. Information shared through that technology includes basic contact information and limited demographic information for each attendee. This information is shared by way of the exhibitor scanning an individual's badge with the individual's consent in the confines of the exhibitor's booth in the Exhibit Hall. Agreeing to have your badge scanned by an exhibitor is providing consent for this information to be shared with that exhibitor.

Exhibitor communications may be sent to those attendees who "opt in" to receive them. If you "opt out," you will be excluded from these communications. All exhibitor communications will be sent to you through a 3rd party email vendor. Your email address will **NEVER** be shared with any exhibitor unless you do so voluntarily.

Should you choose to register for an industry-sponsored educational symposium, please know that by doing so you are voluntarily providing the symposium sponsor with select demographic information that they may use for direct marketing purposes.

Photography/Video: No individual or entity other than the AARC may record (audio or video) any portion of AARC Congress 2019 for any purpose without the prior written consent of the AARC.

Digital photos of PowerPoint slides are prohibited. All presented content is the intellectual property of the lecturer. Presenters (at their discretion) may choose to share their slide deck via the mobile event app, otherwise requests for slide decks must be made directly with the presenter.

Minors: Due to the cost and complexity of displayed equipment in the Exhibition, minors under the age of 13 will not be permitted in the Exhibit Hall for any reason. Children ages 13–17 (with prior approval from Show Management) may participate in all Congress-related functions with an adult escort and must pay the appropriate Guest registration fee. Requests should be directed to: Annissa Buchanan at annissa.buchanan@aarc.org or (972) 243-2272.

Marketing Products/Services During the Meeting: Only confirmed exhibitors may market products or services to meeting attendees or other exhibitors. Paying attendees are not permitted to do so.

Removal from Premises: The AARC reserves the right to remove any attendee/exhibitor from the premises without refund.

Registration (continued)

Pre-Congress Courses

- Pre-courses will be held on Friday, November 8, 2019.
- Pre-Courses run concurrently. You may register for only one of the courses.
- You must attend the entire course to receive CRCE credit; no partial credit will be given.
- Students do not receive CRCE credit.
- Course capacities are limited.
- Pre-registration is required. Deadline: Wednesday, October 16, 2019 or when the course is full.

Fees for each Pre-Course:

	Through Sept 9	After Sept 9 and On-Site
AARC member:	$75	$90
AARC Senior Member:	$25	$25
AARC Student Member:	$25*	$25*
Non-member Student:	$100**	$125**
Non-Member	$100	$125
Exhibitor	$50	$56

** Students do not receive CRCE credit.*

*** Non-member students can save on Pre-Course registration fees by first joining the AARC then registering as an AARC Student Member. Otherwise, non-member students must pay the non-member registration rate. Visit www.AARC.org and click "Membership" for details. Students do not earn CRCE credits.*

#1.) The Burden of Asthma and Emerging Therapies
1:00 pm - 5:00 pm

#2.) Women in Leadership: Moving Forward
1:00 pm - 5:00 pm

To Register for Congress and Pre-Courses

Go to http://www.aarc.org/go/c19r/.

Receipts

A receipt for your registration fee(s) will be emailed to you upon completion of your registration. You may also request a receipt by emailing aarc@xpressreg.net or calling 972-243-2272. Present your receipt on-site to receive your name badge and Congress Program.

On-site Congress Registration Hours

Friday, November 8	10:00 am – 6:00 pm
Saturday, November 9	7:00 am – 4:00 pm
Sunday, November 10	7:30 am – 4:00 pm
Monday, November 11	8:00 am – 4:00 pm
Tuesday, November 12	8:00 am – 10:00 am
	8:00 am – 2:00 pm—CRCE Assistance Available

Site and Hotels Information

Convention Site

All official Congress pre-courses, lectures, exhibits and the Sputum Bowl Finals, unless otherwise noted, will take place at the Ernest N. Morial Convention Center, 900 Convention Center Boulevard, New Orleans, Louisiana 70130.

Official Congress 2019 Hotels

The headquarters hotel is the New Orleans Marriott, 555 Canal St., New Orleans, LA 70130.
The Welcome Party will be held at the headquarters hotel.

Visit http://www.aarc.org/go/c19h/ for all hotel rate information and reservation instructions, as well as a map showing our official hotels. Avoid scams when registering for the AARC Congress and booking your hotel by using only the links shown on this page.

Travel Discounts

Discounts are offered to AARC Congress attendees, exhibitors, family members, and friends.

The air, car and shared-ride shuttle discounts are valid for the Louis Armstrong New Orleans International Airport (MSY) [www.flymsy.com]. The airport is approximately 16 miles away from the Ernest N. Morial Convention Center.

Budget

- **Online** at www.budget.com. Enter the **BCD** number, **U064639**, to receive the discount.
- **Call** 800-842-5628. Refer to **BCD** number **U064639**.

enterprise rent-a-car

- **Online** at www.enterprise.com. Enter Discount Rate Code **L9D0194** in the "Promotion Code" box.
- **Call** 800-736-8222. Refer to Discount Rate Code **L9D0194**.

Hertz

- **Online** at www.hertz.com. Enter **049T0015** in the Convention Number (CV) discount code box.
- **Call** 800-654-2240 or 405-749-4434. Refer to Convention Discount Code **049T0015**.

Airport Shuttle New Orleans

Airport Shuttle: Shuttle service is available from ***Airport Shuttle*** from the airport to hotels and various other locations in New Orleans.

Receive the AARC $4 per person discount by booking your individual and/or group shuttle at least **24 hours prior to your flight arrival time at this link: https://tinyurl.com/AARCShuttle**

- **Shuttle service must be booked through the above link to receive the discount. The discount does NOT apply to shuttle service booked at the Airport Shuttle kiosks in the airport.**
- The fare includes up to three (3) bags per person. Additional baggage may be subject to additional fees.
- You can make changes to your reservation using the same link.
- Airport Shuttle vans are white with yellow lettering that says "Airport Shuttle" on the side.

CAREY NEW ORLEANS

Airport Limousines: Carey New Orleans® is the official car/limo service for the AARC Congress. Receive AARC Congress discounted rates by booking your car service at this link: **https://tinyurl.com/AARCCars**

DELTA

- **Online** at delta.com. Choose "Advanced Search" and enter Meeting Event Code **NY2NJ**.
- Call Delta Meeting Network at (800) 328-1111. Refer to Meeting Code **NY2NJ**.

UNITED

- **Online** at www.united.com. Choose "Advanced Search". On the "Book a Flight" page, enter Offer Code **ZGJC750710** in the "Promotions and Certificates" box at the bottom of the page.
- **Call** United Reservations Meetings Desk at 800-426-1122. Refer to **Z** code **ZGJC** and Agreement Code **750710**.

AARC discounted rates are only available when booking reservations online using the link provided.

Taxicabs:

- Taxicab booths are located on the first level of the terminal outside of Baggage Claim belts 1 and 14. Passengers must wait in line at one of these booths for taxi service.
- Taxi rides cost approximately $36.00 from the airport to the Central Business District (CBD) or the French Quarter (west of Elysian Fields) for up to two (2) passengers. Taxis are required to accept credit card payments.

UBER lyft

Uber: Detailed information and download the app at this link: **https://tinyurl.com/AARCUber** Get $5 off each of your first three rides. Use promo code **NEWRIDER15**. Expires 30 days after the promo code is applied to your Uber account.

Lyft: Detailed information and download the app at this link: **https://tinyurl.com/AARCLyft**

Reward your staff with a trip to Congress

Day Tripper Group Package $717

Package includes: 4 one-day vouchers to AARC Congress 2019. Price equates to $180 per day, a savings of about 25% from the daily full-day registration rate for AARC members.

The AARC is again offering everyone a flexible opportunity to attend this premier event.

Individual Attendees… Want to attend AARC Congress 2019, but can't get the time off from work for all 4 days of the meeting? Perhaps a single day registration is more affordable and right up your alley. The AARC Day Tripper Package is a great opportunity for you and three other therapists to attend the 4-day event that is loaded with education, exhibits, networking, and many other activities.

Managers… Maybe you've wanted to send your staff in the past, but your budget can't absorb multiple, 4-day registrations. Even more importantly, department staffing won't let you give multiple employees off all at the same time.

Here's how it works:

- Order the Day Tripper Voucher Package any time between now and Wednesday, October 16.
- You will receive 4 one-day vouchers to Congress 2019 in New Orleans.
- Each voucher is good for one person for any one of the 4 days of Congress (November 9-12).
- The attendee brings the voucher to the Onsite Registration counter on the desired day and uses it to register for that day.
- The attendee has all the same privileges as other attendees who purchase a one-day registration onsite at the rate of $237 for members or $367 for nonmembers, a savings of up to $187 per person!

Benefits to Attendees

- Earn CRCEs at premier educational programs
- Opportunity to visit the largest respiratory care exhibit hall in the world
- Network with other professionals and meet the "who's who" in respiratory care

Make it easy on yourself:

- Collaborate with your colleagues and decide at the last minute whom will attend—or change it if circumstances change.
- Mix and match any way you want. A different person can attend each day. Or 4 people can all attend on one day. Or 2 people can use vouchers for 2 days each. Make it work for you and your schedule.
- Anyone you select can attend… members or non-members.

Answers to FAQs:

- Day Tripper is a special advance purchase program available only between now and Wednesday, October 16.
- Payment is required in advance with a check or credit card. Sorry, no purchase orders.
- Purchase of a Day Tripper package will be a stand-alone transaction. It cannot be combined with a Congress registration purchase.
- **The package is nonrefundable.**
- Vouchers may be used by AARC members or nonmembers.
- Vouchers are fully transferable by the purchaser or within the purchasing company, and are not specific to a day of the event or to an individual. They may be used at any time during AARC Congress 2019.
- *Lectures will be presented November 9–12, Saturday through Tuesday. Note that exhibits are open November 9–11 only.*
- Registration for specific names and dates is not required in advance. The attendee simply brings the voucher to the Onsite Registration counter upon arrival.
- Vouchers can be used on four different days, or all on the same day, by 1 person for 4 days, 2 people at 2 days each, or 4 people each attending one day… or any one of the many different combinations. The choice is yours!

To take advantage of this great Day Tripper package visit http://www.aarc.org/go/c19d/.

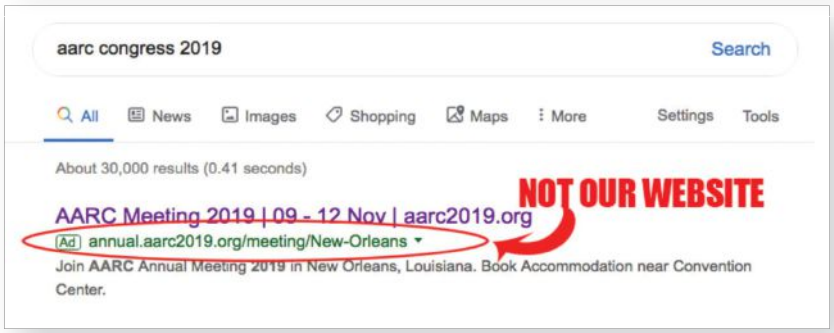
Questions?

Contact info@aarc.org or call Customer Service at (972) 243-2272.

ALERT!

AVOID SCAMS WHEN REGISTERING FOR AARC MEETINGS & BOOKING HOTELS

Housing reservations for AARC Congress will not be open until the end of August 2019. Reservations for official AARC Congress hotels can only be made through the link that will be posted on www.AARC.org.



Be Aware: Unauthorized registration and housing entities are advertising online and contacting attendees and exhibitors to register for AARC meetings and make hotel reservations. Some of these groups are even posing as the AARC. Booking through an unofficial registration or housing company puts you at risk for illegitimate registrations or losing significant deposits, hotel reservations, and incurring hidden costs. See examples of some fraudulent emails and websites.

Safety Tip: ALWAYS look for the aarc.org domain name in website addresses and email addresses to ensure it's a legitimate AARC website or email.

Housing information will be available on AARC.org at the end of August 2019.

AARC CONGRESS 2019

Keeping **Patient Safety** at the Forefront

by Kevin M. McQueen, MHA, RRT, RRT-ACCS, CPPS, CM

If asked, most clinicians could not fathom causing harm to their patients. The Hippocratic Oath taken by providers is often misquoted as including the words *primum non nocere*, or *first do no harm*. The sad reality is that even the most educated, talented, and cautious clinicians on occasion inadvertently harm their patients.

In fact, the number of medical errors is alarming. Dr. Martin Makary and his colleagues at Johns Hopkins University analyzed prior published research data and estimated that more than 250,000 Americans die each year from medical errors in U.S. hospitals.[1] When comparing those figures with the Centers for Disease Control and Prevention list of the most common causes of death in the United States each year, medical errors would be the third leading cause of death, just behind heart disease and cancer.[1]

Errors can occur at any segment of the medical treatment continuum, and they are often due to unintended acts of omission or commission, where omission may be a lapse, slip, or failure to do something, and commission may be an instance in which the incorrect action was taken.[1] Examples of medical errors can include failure to rescue, surgical infections, opioid-induced respiratory depression, unplanned extubations, medication type or dosing errors, hospital-acquired conditions, or an endless list of complex system issues.

There are several stakeholders who want the United States to take a more assertive stance toward patient safety, namely to reduce the number of medical errors and incidents of preventable harm. In the forefront are the patient and their family members, who are directly impacted by the errors. Although the majority of medical errors may go unnoticed, there are numerous adverse events that rise to the level of significant harm or even death.

Impact to stakeholders

Patients: Medical errors may cause pain and discomfort, extended hospital stays, life-altering long-term sequelae, disability, or, in worst case situations, death.

Family members: The patient's family members may also be affected by medical errors. Caring for a loved one who endures any kind of medical error can be stressful, especially when the error causes significant harm or death.

Hospital Employees: Inadvertently harming a patient may have a weighty emotional impact on a care provider. Often referred to as the "second victim," clinicians may become depressed, withdrawn, and or even leave the medical

profession altogether.[2] There may also be legal consequences with lawsuits, professional board actions, or, in exceptionally rare instances, prosecution.

Hospitals: Significant medical errors and poor safety ratings can have financial and reputational impacts on hospitals and health systems. With the Centers for Medicare & Medicaid Services (CMS) and other payers implementing pay-for-performance initiatives, hospitals with poor quality and poor patient-safety outcomes may see measurable impacts to their financial bottom line.[3,4] Outcomes data can steer payers and large corporations to refer their insured individuals to hospitals with the best outcomes.[4] Negative press associated with medical errors may also influence patients to utilize competing hospitals. Lastly, the high costs associated with defending against injury or wrongful death lawsuits can severely affect a hospital's financial status.

Government and payers: The financial impact to payers, whether government or private, due to medical errors is substantial, estimated to be between $17 and $38 billion dollars annually.[3,5] When hospitals provide high-quality, safer care with better outcomes, the costs to the payers are usually reduced.[3]

What can RT leaders do?

Patient safety experts from across the nation are encouraging all health care leaders to make patient safety a top priority.[5] As a profession, RTs need to step up to the plate and be more proactive in the efforts surrounding patient safety.

From a leadership standpoint, one of the most important aspects is to create a healthy culture of safety and a climate focused on safety. This requires creating an atmosphere of trust, transparency, reporting, and accountability where staff members feel safe to report near misses, close calls, and even adverse events without fear of reprisal.[6]

Three things to help strengthen a culture of safety include:

- Create a clear sense of purpose around the concepts of patient safety to energize your team.[5]
- Promote a shared-governance approach: trust your frontline staff to help identify patient safety concerns and improve processes.
- Build a continuous learning environment, which includes education related to patient safety, performance improvement, evidence-based practices, and human factors engineering (designing products or processes with safety features that address potential human failure points when interaction occurs between an individual and technology).

Leaders need to place patient safety at the top of their agendas and ensure their departments are not functioning to maintain the status quo. Examples could include staff meetings, shift huddles, good catch awards or a performance improvement team. Instead of reactively responding to adverse events with a "find and fix" mentality, leaders must be proactive in searching out processes within their areas of influence that include a respiratory component and identifying opportunities for refinement or improvement.[7] Instead of focusing time, energy, and financial resources on why things go wrong, the impetus should be designing safe and effective processes that ensure things go right.[7]

One example of a large-scale patient safety initiative can be found at the University of Colorado Health (UCHealth), where they are implementing a comprehensive enhancement of the health care system's assessment and monitoring processes surrounding patients receiving opioids. UCHealth's system-wide performance improvement project, which was originally spearheaded by the respiratory department leaders, includes 13 hospitals throughout the Colorado Front Range and more than 34 acute-care nursing units. The project team is utilizing published best-practice recommendations to reduce harm associated with opioid-induced respiratory depression, and they are incorporating subject-matter experts such as physicians, pharmacists, nurses, respiratory therapists, and risk-management, patient safety, and process-improvement professionals.[8] The

team's goals are to enhance all key steps throughout the entire opioid-administration process, including a state-of-the-art virtual health component with dedicated staff to monitor capnography, oximetry, and respiratory rates and to notify bedside clinicians if the readings are outside of acceptable limits.

What can frontline RTs do?

From a frontline RT standpoint, there are several activities in which staff can assist their managers with improving patient safety:

- Be vigilant when providing care, and look for things that could lead to harm. Example could be an RT that speaks up when they observe a deviation from safe practice, such as finding a syringe with neuromuscular medication left out unsecured and reports the finding.
- Report near misses, close calls, workarounds, poorly designed processes, and any other safety concerns to your managers.
- Join or develop a shared-governance council, performance-improvement team, or multidisciplinary committee (eg, a journal club to share updates on evidence-based practices, an RT-led patient safety or best practice committee, a monthly "Good Catch" Award, Patient Safety Week events).
- Having dedicated RTs involved in committee-level decision making is critical to ensure all patients receive the safest respiratory care available.
- Be an active member of the AARC to remain current on best practices in respiratory care.

Potential patient safety projects to consider

- Monitoring patients for respiratory depression associated with opioid administration
- Evaluation of length of shifts, overtime, exhaustion or burnout in the workplace

Other Resources

Agency for healthcare Research and Quality (AHRQ). Available at: https://www.ahrq.gov

ECRI Institute: Top 10 Patient Safety Concerns and Top 10 Technology Hazards. Available at: https://www.ecri.org

National Patient Safety Foundation (NPSF): Safety Issues/Hot Topics. Available at: http://www.npsf.org

The Patient Safety Movement (PSM): Actionable Patient Safety Solutions (APSS). Available at: https://patientsafetymovement.org/actionable-solutions/actionable-patient-safety-solutions-apss

The Joint Commission: Sentinel Event Alerts (SEAs). Available at: https://www.jointcommission.org/sentinel_event.aspx

The Hospital Quality Institute. Reducing Harm from Respiratory Depression in Non-ICU Patients: Through Risk Mitigation and Respiratory Monitoring. Available at: http://www.hqinstitute.org/post/reducing-harm-respiratory-depression-non-icu-patients-through-risk-mitigation-and-respiratory

RESPIRATORY PATIENT ADVOCACY SUMMIT

JOIN THE PATIENT ADVOCACY MOVEMENT

November 8, 2019
New Orleans Marriott, Louisiana
11:45 a.m. – 5 p.m.

ATTEND AARC'S RESPIRATORY PATIENT ADVOCACY SUMMIT

Help Enact Change for Quality Respiratory Patient Care

Patients with chronic respiratory conditions and caregivers know that it's essential for medical professionals and patients to communicate, share information, and join together to achieve the best in patient care and quality of life.

The AARC Respiratory Patient Advocacy Summit builds partnerships between chronic respiratory patients, caregivers, advocates, physicians, and respiratory therapists. It aligns these groups toward the goal of improving patient care, equipment, and services.

The Summit includes lectures and discussions with top physicians, inviting respiratory therapists and advocates to share their clinical insights and strategies to improve patient care. Guests will also participate in roundtable discussions and connect with influencers in the respiratory industry. **Registration is free. Sign up today!**

Lunch and refreshments will be provided
After registration, you will receive an email notification with additional meeting details. Parking vouchers will be provided.

The Summit is held in conjunction with AARC's International Respiratory Congress Nov. 9–12

Who Should Attend the Summit?

- ✓ Patients who have chronic respiratory diseases
- ✓ Patient advocates
- ✓ Caregivers, family, friends of patients
- ✓ Respiratory therapists and physicians

Lectures & Discussions:

Patient Keynotes:

Val Chang, JD, Executive Director, Hawaii COPD Coalition

National Patient Advocacy Award Presentation —
a collaboration between FACES Foundation and AARC – Sharman Lamka, President & Co-Founder, The FACES Foundation

Roundtable Sessions

The ALS Association — Kathleen Sheehan, Vice President, Public Policy

Dorney-Koppel Foundation — Grace Anne Dorney Koppel, MA, JD, President

Cystic Fibrosis Foundation — David Elin, MSW, Director, Policy & Advocacy

PHAware Global Association — Marie Mascia-Rand, Co-Founder & Managing Director

Alpha-1 Foundation — Miriam O'Day, President & CEO

American Association for Respiratory Care

TO REGISTER:
Visit **www.aarc.org/go/summit19**
or contact 972-243-2272

Silver sponsors:

GlaxoSmithKline

Mylan — Better Health for a Better World

- Processes surrounding hand-off communication (eg, minimize interruptions during hand-offs, identify and utilize best practices such as bedside shift report)
- Airway safety/unplanned extubations
- Medication-administration processes (eg, implement a "no interruption zone" at medication carts, develop rules to reduce distractions, monitor compliance with barcode medication administration)
- Intrafacility transfers of ventilated patients
- Bronchoscopy sedation processes
- Teaching or reviewing advanced or less frequently used ventilation modalities

About the Author…

Kevin M. McQueen, MHA, RRT, RRT-ACCS, CPPS, CM, currently serves as the director of Southern Colorado Region, respiratory therapy/pulmonary diagnostics, pulmonary rehabilitation & sleep diagnostics, hyperbarics.

In addition, there are several patient safety organizations that publish current patient safety concerns, along with tools to improve care (see Other Resources).

Patient safety needs to be a national priority. The high numbers of unintentional medical errors due to complex working environments and poorly designed processes affect us all. The Joint Commission, CMS, and Leapfrog are all organizations that champion patient safety by helping health care organizations to improve quality and patient safety, because patients deserve to be safe when seeking medical treatment at our hospitals. It is up to all of us as health care professionals to make a concerted effort to improve processes surrounding the care we provide. ■

References

1. Makary MA, Daniel M. Medical error: the third leading cause of death in the US. BMJ 2016;353:i2139.
2. Edress H, Connors C, Paine L, Norvell M, Taylor H, Wu AW. Implementing the RISE second victim support program at the Johns Hopkins Hospital: a case study. BMJ Open 2016;6:e011708.
3. Wang Y, Eldridge N, Metersky ML, et al. Association between hospital performance on patient safety and 30-day mortality and unplanned readmission for Medicare fee-for-service patients with acute myocardial infarction. J Am Heart Assoc 2016;5(7);e003731.
4. Isaac T, Jha AK. Are patient safety indicators related to widely used measures of hospital quality? J Gen Intern Med 2008;23(9):1373–1378.
5. McFadden KL, Stock GN, Gowen CR 3rd. Leadership, safety climate, and continuous quality improvement: Impact on process quality and patient safety. Health Care Manage Rev 2015;40(1):24–34.
6. Leape L, Berwick D, Clancy C, et al. Transforming healthcare: a patient safety imperative. Qual Saf Health Care 2009;18:424–428.
7. Braithwaite J, Wears RL, Hollnagel E. Resilient health care: turning patient safety on its head. Int J Qual Health Care 2015:27(5);418–420.
8. Atkins P, Romanoff N, McQueen K, Munoz A. Reducing harm from respiratory depression in non-ICU patients: through risk mitigation and respiratory monitoring. Sacramento, CA: Hospital Quality Institute, 2017:1-51.

Industry Update

Featuring information on products and equipment from manufacturers

Industry Watch

First COPD patients treated with novel procedure

Nuvaira has announced the first treatments in the AIRFLOW-3 trial, the first interventional COPD trial to target reduction in COPD exacerbations as a primary endpoint. Two U.S. patients were successfully treated with Nuvaira's targeted lung denervation (TLD) therapy at the Temple Lung Center at Temple University Hospital in Philadelphia, and both returned home the same day. TLD is a bronchoscopic procedure that disrupts pulmonary nerve input to the lung to reduce the clinical consequences of neural hyperactivity. Mechanistically similar to anticholinergics, which must be taken daily to manage symptoms, the one-time TLD procedure has the potential to durably reduce exacerbation risk, improve symptoms, and stabilize lung function.

Circassia Pharmaceuticals receives award

Circassia Pharmaceuticals, Inc., has received the "Innovative Technology Supplier of the Year" award by Vizient, Inc., the largest member-driven health care performance improvement company in the country. The award, which was presented at the 2019 Vizient Connections Business Summit in Las Vegas, honors Circassia as a supplier whose NIOX® technology has advanced patient care and patient and health care worker safety and delivered solutions that drive incremental improvement to an organization's care or business model. "At Circassia, we strive to provide excellent products and high-quality service to all of our customers, every day," said David Acheson, senior vice president, U.S. Commercial, Circassia. "It is gratifying to be formally recognized by Vizient for delivering our innovative NIOX technology alongside exceptional customer service to their members."

FDA approves Zerbaxa for respiratory indications

The FDA has approved a new indication for the previously FDA-approved drug, Zerbaxa (ceftolozane and tazobactam), which is made by Merck. The drug is now also approved for the treatment of hospital-acquired bacterial pneumonia and ventilator-associated bacterial pneumonia in patients 18 years and older. "Hospital-acquired and ventilator-associated bacterial pneumonia are serious infections that can result in death in some patients," said FDA Principal Deputy Commissioner Amy Abernethy, MD, PhD. "New therapies to treat these infections are important to meet patient needs because of increasing antimicrobial resistance." The FDA initially approved Zerbaxa in 2014 to treat complicated intra-abdominal infections and complicated urinary tract infections.

Research aims to improve lung cancer care

The National Comprehensive Cancer Network® (NCCN®) Oncology Research Program is collaborating with AstraZeneca to seek proposals for improving care processes for patients with unresectable stage III and stage IV non-small cell lung cancer. Researchers from NCCN's 28 member institutions were invited to apply by submitting a letter of intent by July 9, 2019. "Non-small cell lung cancer is the leading cause of cancer death in the United States, and the second most common cancer diagnosis in both men and women," said Wui-Jin Koh, MD, chief medical officer for NCCN. "As part of our mission to advance high-quality, patient-centric care, we're eager to facilitate projects that will improve the delivery of cancer care for advanced-stage lung cancer patients. We look forward to working with investigators to explore better ways to deliver the best treatment at the optimal time."

Cornell to work with EPA on air pollution project

A team from Cornell University will work with the EPA over the next year on a machine-learning model designed to predict fossil fuel emissions. Titled, "Predicting the Environmental Performance of Power Plants Using Machine Learning," the initiative will apply the machine-learning model to air pollution monitoring data from the EPA's Clean Air Markets Division (CAMD). The group will further develop the model to identify anomalies in CAMD data in an effort to enhance the quality of the data. The project was a winning entry in the EPA-sponsored EmPOWER Air Data Challenge.

ATS supports international tobacco-control initiative

Alongside members of the Forum of

NEW & IMPROVED!
now includes patient metrics

AARC Benchmarking System

Track AND Compare

Patient & Performance Metrics with Top RT Departments

The AARC Benchmarking System Assists Managers with:

- Department performance evaluations and new process implementation
- Comparing workload performance for high-volume procedures
- Customized compare groups to investigate performance differences
- Advice and consultations via email from other facility managers

MISSED TREATMENTS	VENTS DAYS - PATIENTS
75% ILE	75% ILE
50% ILE	50% ILE
25% ILE	25% ILE
See Website About These Metrics	See Website About These Metrics

These, metrics represent the mean values of all hospitals reporting data into the AARC Benchmarking Systems during the most recent quarter.

METRICS ARE UPDATED BY THE 15TH OF EACH MONTH.

ONE-YEAR SUBSCRIPTION

Nonmember Price: $495
AARC MEMBER PRICE: $395
Member savings $100

6-MONTH SUBSCRIPTION

Nonmember Price: $350
AARC MEMBER PRICE: $300
Member savings $50

Cost Effective Internal System Benchmarking: Add any hospital within your healthcare system for only $150 more.

EXCLUSIVE RENEWAL PRICING: $100

LEARN MORE VISIT: https://aarc.org/go/benchmarking

Supported in part by an unrestricted educational grant from Dräger

International Respiratory Societies, the American Thoracic Society has called for renewed efforts to strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries. The goal is to work toward achieving the United Nations Global Goals for Sustainable Development to ensure a healthy life and to promote well-being for all people at all ages. The initiative will tackle issues ranging from increasing taxes and prices on tobacco products to enacting and enforcing comprehensive bans of tobacco advertising, promotion, and sponsorship.

FDA committee issues favorable vote for TB drug

According to the TB Alliance, the FDA's Antimicrobial Drugs Advisory Committee has concluded that there is substantial evidence of the effectiveness and safety of pretomanid as part of a combination regimen with bedaquiline and linezolid in adults for the treatment of extensively drug-resistant, treatment-intolerant, or nonresponsive multidrug-resistant pulmonary tuberculosis. The investigational anti-TB drug is the subject of a New Drug Application currently under Priority Review by the FDA as well as a Marketing Authorization Application under review by the European Medicines Agency. Pretomanid has been developed by the TB Alliance, a non-profit drug developer, as part of an all-oral combination therapy known as the BPaL regimen (composed of bedaquiline, pretomanid, and linezolid). "We are encouraged by the advisory committee's vote in favor of pretomanid for use in combination with bedaquiline and linezolid for the treatment of highly resistant forms of TB, and we look forward to the FDA's final action," said Mel Spigelman, president and CEO of the TB Alliance.

Cystic fibrosis drug moves forward in Europe

Proteostasis Therapeutics, Inc. (PTI), has announced that the European Commission (EC) has granted orphan drug designation (ODD) to PTI-428 for the treatment of cystic fibrosis. PTI-428 is the company's proprietary cystic fibrosis transmembrane conductance regulator (CFTR) amplifier that is currently in clinical development. In addition to the ODD from the EC, PTI-428 has the ODD, the Breakthrough Therapy Designation, and the Fast Track Designation from the FDA. "This designation by the EC is further validation of both PTI-428's potential and PTI's mission to offer additional disease-modifying treatment options for CF," said Meenu Chhabra, PTI president and CEO. "We look forward to advancing PTI-428 in the clinic later this year."

New assay assesses the lung health of donor lungs

University Health Network (UHN) and SQI Diagnostics, Inc., have performed the first successful tests of a groundbreaking research-use assay that reduces the time to assess the lung health of donor lungs from over three hours to less than 50 minutes. Developed by the Toronto Lung Transplant Program at UHN along with SQI Diagnostics, the TORdx™ LUNG gives transplant surgeons an indication of lung health by measuring certain biomarkers of the donor organ throughout the lung transplantation procedure. "Integrating rapid diagnostics gives transplant teams the means to more accurately assess the health of donor lungs," said Dr. Shaf Keshavjee, Toronto Lung Transplant Program director. "Time-to-result is key because it can provide critical information on donor lung health to a surgeon before transplant begins."

Sleep drug receives DEA designation

According to Jazz Pharmaceuticals plc, the U.S. Drug Enforcement Agency (DEA) has designated solriamfetol, also known as *Sunosi*, as a Schedule IV medicine. With FDA approval in March, *Sunosi* became the first and only dual-acting dopamine and norepinephrine reuptake inhibitor approved to improve wakefulness in adult patients with excessive daytime sleepiness associated with narcolepsy or obstructive sleep apnea (OSA). "Jazz Pharmaceuticals focuses on doing what is best for patients and we are committed to the safe and appropriate use of our medicines for debilitating conditions like excessive daytime sleepiness associated with narcolepsy or OSA," said Bruce Cozadd, chairman and CEO of Jazz Pharmaceuticals. "We are pleased that *Sunosi* has received a Schedule IV designation that aligns with our research demonstrating this medicine's relatively low potential for abuse and risk of dependence."

Positive results seen for OSA drug

Therapix Biosciences, Ltd., has announced interim results from its Phase IIa clinical study at Assuta Medical Center in Israel, suggesting that THX-110, a combination of dronabinol (Δ-9-tetrahydracannabinol) and CannAmide™ (palmitoylethanolamide, or PEA), positively affects symptoms in adult subjects with obstructive sleep apnea (OSA). Out of seven patients who have completed the study so far, four exhibited significant improvement in all assessed study parameters, including reduction in the apnea-hypopnea index and an improvement in the oxygen desaturation index, with one patient showing mild improvement. In general, the study medication was well tolerated, with only two patients exhibiting negative results. Adverse events were resolved after the dosage was decreased to 5 mg/day. "The encouraging interim results of this study is a promising indicator that Therapix's proprietary drug candidate THX-110 may provide a pharmacological treatment for OSA," said Adi Zuloff-Shani, PhD, CTO at Therapix. ■

CORPORATE PARTNERS

THE 2019 AARC CORPORATE PARTNERS

Since 1947, the AARC has been leading the effort to advance the science and practices of the respiratory care profession while promoting the highest quality of care for our patients. Collaborating with the respiratory communities at-large, we have successfully advocated at the federal, state and local level for patients, their families, the community, the profession and the respiratory therapist.

The collaborative efforts between the respiratory care profession and manufacturers in pursuing unique and innovative ways to improve both the quality and outcomes of our patients makes us natural partners in today's ever changing health care continuum.

As health care finances become more strained and patient care becomes increasingly more complex, the mutual challenges become greater for the profession and its industry partners. The inherent synergies of the corporate partner concept are to provide an effective and efficient way to address those needs utilizing our combined skills and resources.

PLATINUM SPONSOR

Masimo

Medtronic
Further, Together

monaghan

Fisher & Paykel HEALTHCARE

HAMILTON MEDICAL
Intelligent Ventilation since 1983

Mallinckrodt Pharmaceuticals

SUNOVION
Healthy bodies, healthy lives

VAPOTHERM

SILVER SPONSOR

Boehringer Ingelheim

RC Currents

IN THE NEWS

RC WEEK COMING UP IN OCTOBER!

National Respiratory Care Week will take place Oct. 20–26, and if you're like most AARC members, you're looking forward to the chance to shine the spotlight on your profession. To get everyone ready for RC Week 2019, we thought we'd share some great images from last year's celebrations.

Looking for ideas for your 2019 events? Check out our RC Week tools on AARC.org. ■

— OCTOBER 20–26, 2019 —

Every therapist has a story to tell about a favorite or most memorable patient that would interest others in the profession. Maybe it was an "aha moment" when you knew you had made the right professional decision for that patient. Maybe it was when you first realized how much difference you were making in the lives of that patient and his family. Or maybe it was just something the patient said or did that made you laugh or cry or just be inspired to be a better RT. Our "Storytellers" column is the place to share these stories. Send your story to AARC via this URL: http://c.aarc.org/members_area/aarc_times/pay_it_forward/ ■

Machine-Learning Tool Predicts Readmissions

A novel machine-learning model developed at the University of Maryland Medical System (UMMS) may help hospitals better predict which discharged patients are likely to be readmitted. Dubbed the Baltimore score (B score), the algorithm resulted from the evaluation of more than 8,000 possible data variables collected over a two-year period. The final machine-learning model drew from 382 variables, including demographics, lab test results, whether the patient required breathing assistance, body mass index, affiliation with a specific church, marital status, employment, medication usage, and substance abuse.

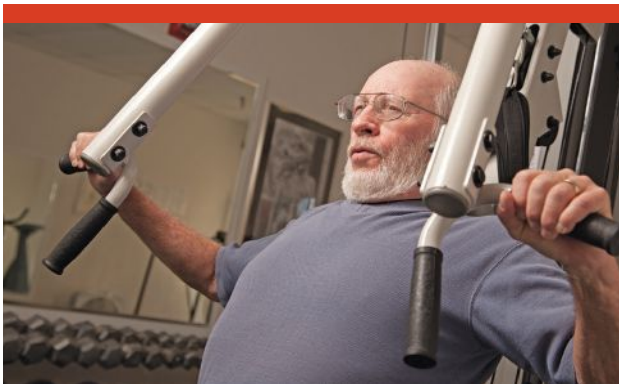
The researchers then compared the B score readmission-risk ranking to actual readmissions at three UMMS hospitals, as well as to the predictions scored by other scoring programs. Despite different settings, the B score was better able to identify patients at risk of readmission than other scores across the three hospitals. It was most accurate among patients at highest risk. Patients scoring in the top 10% of B score risk at discharge had a 37.5% chance of 30-day unplanned readmission; patients in the top 5% had a 43.1% chance.

The study was published in a recent edition of *JAMA Network Open*. ■

SLEEP PROBLEMS LINKED TO METABOLIC DISORDERS

A new study supported by the National Heart, Lung, and Blood Institute suggests variations in sleep duration and bedtimes can contribute to the develo pment of metabolic disorders. Investigators from Brigham and Women's Hospital followed 2,003 men and women, ages 45 to 84, who wore ActiGraph wristwatches to closely track sleep schedules for seven consecutive days; they also kept a sleep diary and responded to standard questionnaires about sleep habits and other lifestyle and health factors over a six-year period.

Variations in sleep duration and bedtimes preceded the development of metabolic dysfunction in the participants. Increasing sleep duration or bedtime variability was strongly associated with simultaneous problems such as lower HDL cholesterol and higher waist circumference, blood pressure, total triglycerides, and fasting glucose. Those whose sleep duration varied by more than one hour were more likely to be African-American, work non-dayshift schedules, smoke, and have shorter sleep duration. They also had higher depressive symptoms, total caloric intake, and index of sleep apnea. The study was published in *Diabetes Care* earlier this year. ■



EXERCISE MAY HELP WARD OFF COPD

We know quitting smoking can reduce the risk and the severity of COPD. According to researchers from Denmark, exercise can have a positive effect as well.

The investigators tracked the respiratory health of 4,730 healthy middle-aged men with an average age of 49 years from the Copenhagen Male Study who were recruited from 14 large workplaces in Copenhagen between 1970 and 1971, then monitored the subjects for up to 46 years. Cardiorespiratory fitness (CRF) was calculated as low, normal, or high using a VO2max test.

Compared to men with low CRF, the estimated risk of COPD diagnosis was 21% lower in men with normal CRF and 31% lower in men with high CRF. Similarly, compared to men with low CRF, the estimated risk of death from COPD was 35% lower in men with normal CRF and 62% lower in men with high CRF. High CRF in middle age was also associated with a delay of 1.5–2 years in both diagnosis of, and death from, COPD. The results were largely unchanged after excluding those who were diagnosed with COPD or who died during the first 10 years of monitoring. The study was published in *Thorax* earlier this year. ■

E-CIG VAPORS MAY CAUSE MUCOCILIARY DYSFUNCTION

According to U.S. researchers who exposed human airway cells to e-cigarette vapor continuing nicotine, the vapor decreased the ability of the cells to move mucus across the surface, leading to mucociliary dysfunction.

The study grew out of the team's previous work on the effect of tobacco smoke on mucus clearance from the airways. The investigators sought to answer the question of whether vape containing nicotine has negative effects on the ability to clear secretions from the airways similar to tobacco smoke. Study author Matthias Salathe, MD, from the University of Kansas Medical Center, believes the new study answers that question. "Vaping with nicotine is not harmless as commonly assumed by those who start vaping. At the very least, it increases the risk of chronic bronchitis," he said. "Our study, along with others, might even question e-cigarettes as a harm-reduction approach for current smokers with respect to chronic bronchitis/COPD."

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

Contribute to the AARC "Transitions" Column

The AARC "Transitions" column is devoted to sharing news about the passing of AARC members. You can submit news about your colleagues' recent passing by going to http:c.AARC.org/transitions

Please provide any information about the member's death, such as an obituary, so that we can share it with our members and pay tribute.

TEAM TRAINING

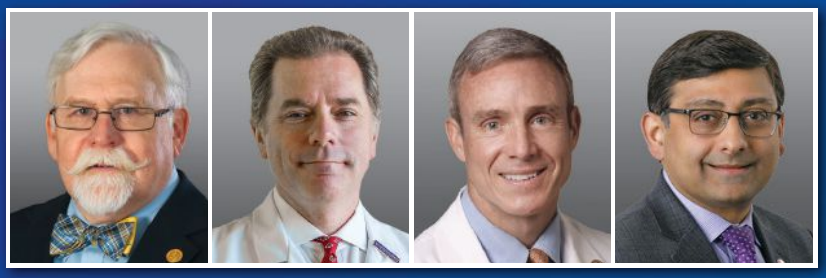
Current Topics in Respiratory Care 2019

- **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

Reducing Hospitalizations for Patients on Hospice

Making sure hospice patients have a prominently displayed do-not-resuscitate (DNR) order in their electronic health record (EHR) can minimize unnecessary care for these patients, report Ohio State College of Medicine researchers publishing in a recent edition of the *American Journal of Hospice & Palliative Medicine*. They arrived at that conclusion after analyzing the health records of 1,185 cancer patients who had been referred to hospice. The presence of a verified DNR before the last 30 days of life reduced the odds of hospitalization. A prominent note in the EHR indicating advanced care planning reduced the chances of admission as well, especially if the note was made at least six months prior to death.

"I think everyone in medicine is aware that we need to do a better job documenting end-of-life wishes, but as a nation we haven't figured out how best to do that," said study author Laura Prater. "It's important to make this part of the process, to look for ways to make sure that these conversations are happening consistently, early, and often, even though they are complex and difficult conversations to have." ■

Patient-Tailored Asthma Intervention Cuts ED Visits

U.S. researchers have found that a comprehensive, patient-tailored, asthma self-management support intervention for older adults can improve clinical and self-management outcomes in this population.

The study is the largest ever to look at this issue in older patients with asthma, and it is the first to screen patients for barriers to asthma control, including social determinants of health, and then target only the identified barriers for intervention. Overall, 391 adults were randomized to the intervention or control groups, and results showed those in the intervention group had a significantly lower risk of making an emergency department visit for their asthma. While 12% of the control group went to the ED, only 6% of the intervention group did.

Said study author Alex D. Federman, MD, MPH, from Mount Sinai, "By screening patients for barriers to controlling their asthma and addressing the barriers that were identified, the new program helped these older adults take their medications regularly, improve their control of asthma, and reduce their visits to emergency departments by more than 50%."

The study was published in a recent edition of *JAMA Internal Medicine*. ■

Progress in the Battle Against TB

Studies have shown that a flurry of immune cells are activated during the first few days after the tuberculosis bacteria enters the body. Now investigators from Washington University School of Medicine in St. Louis and their colleagues at the Africa Health Research Institute in South Africa have discovered a master cell that coordinates that activity. They believe bolstering these cells could help prevent the bacteria from gaining a foothold in the lungs.

"The immune response to the TB bacteria hinges on the early response of this cell, and that opens up a whole new avenue for TB control," said co-author Shabaana Abdul Khader, PhD. "Now we can start thinking about ways to target this cell to help the body fight off the bacteria before they get a chance to establish themselves." The researchers published their findings in a recent edition of *Nature*. ■

Clinics, EDs, Ignore CAP GUIDELINES FOR KIDS

Do young children with community-acquired pneumonia (CAP) really need all the tests and treatments they receive at outpatient clinics and EDs? According to researchers from Ann and Robert H. Lurie Children's Hospital of Chicago, the answer is no.

The study stemmed from 2011 clinical guidelines for pediatric CAP issued by the Pediatric Infectious Diseases Society and the Infectious Diseases Society of America. The guidelines recommend against routine chest x-ray, complete blood count, and blood cultures, as well as routine antibiotics for preschool children treated as out-patients. The investigators evaluated the effectiveness of these guidelines by examining national data representing an estimated 6.3 million visits to out-patient clinics and emergency departments during 2008–2015 by children one to six years of age with CAP. They found that high use of nonrecommended diagnostic tests and antibiotics persisted over the entire study period and that the 2011 guidelines had no impact on practice. Overall, antibiotics were prescribed in nearly 74% of out-patient visits, and chest x-rays were obtained in 43% of such visits.

"Focused quality-improvement efforts are needed to increase guideline adherence to ensure that these children are receiving appropriate, evidence-based care," said study author Todd Florin, MD, MSCE. "We especially need to focus on reducing antibiotic overuse, which is critically important." The study was published in a recent edition of the *Journal of the Pediatric Infectious Diseases Society*. ■

BLAME THE WORKPLACE

The American Thoracic Society and the European Respiratory Society have issued a joint statement on the percentage of respiratory conditions caused by workplace exposures. According to the two organizations, these are the estimated occupational burdens of disease for these lung conditions —

Asthma – 16%

COPD – 14%

Chronic bronchitis – 13%

Idiopathic pulmonary fibrosis – 26%

Hypersensitivity pneumonitis – 19%

Sarcoidosis – 30%
and other granulomatous disease

Pulmonary alveolar proteinosis – 29%

Community-acquired pneumonia – 10%
(in working-age adults)

Tuberculosis – 2%
(in workers exposed to silica dust)

"The role of occupational factors in most lung disease is underrecognized," said Paul D. Blanc, MD, MSPH, chief of the Division of Occupational and Environmental Medicine at the University of California San Francisco, who, along with Carrie A. Redlich, MD, MPH, director of the Occupational and Environmental Medicine Program at Yale University, led the group effort. "Failure to appreciate the importance of work-related factors in such conditions impedes diagnosis, treatment, and, most importantly of all, prevention of further disease."

The joint statement was published in the *American Journal of Respiratory and Critical Care Medicine*. ■

Preventing or Reversing Resistance to Isoniazid

Antibiotic-resistant tuberculosis is a growing problem around the world. Researchers from Washington University School of Medicine in St. Louis and Umea University in Sweden may have an answer. They have discovered a compound that prevents and even reverses resistance to isoniazid, the most widely used antibiotic for treating tuberculosis. According to the investigators, using the compound in conjunction with isoniazid could potentially restore the antibiotic's effectiveness in people with drug-resistant tuberculosis, and it may also bolster the antibiotic's power to kill TB bacteria, making it possible for clinicians to consider shortening the six-month treatment regimen they prescribe today. The study was published in the *Proceedings of the National Academy of Sciences*. ■

INCREASING USE OF E-CIGS IN CANCER PATIENTS

Using data from the CDC's National Health Interview Survey, which included more than 13,000 cancer patients from 2014 to 2017, researchers from University of Texas Southwestern have found an alarming rise in the use of e-cigarettes among cancer survivors and patients. Specific results showed —

- E-cigarette use among people with a cancer diagnosis increased from 8.5% in 2014 to 10.7% in 2017.
- The increase occurred even as conventional smoking remained stable.
- E-cigarette use was especially high among cancer patients under the age of 50 and rose over the study period, from 23% in 2014 to 27% in 2017.

Study author Dr. Nina Sanford emphasizes that e-cigarettes are not an FDA-regulated product. "There's wide variation of what goes into them," she said. "When you pick up an e-cig in the store, you really don't know what's in it." Although she admits the jury is still out on the long-term harm posed by these products, she believes they should be avoided. The study appeared in *JAMA Oncology* earlier this year. ■

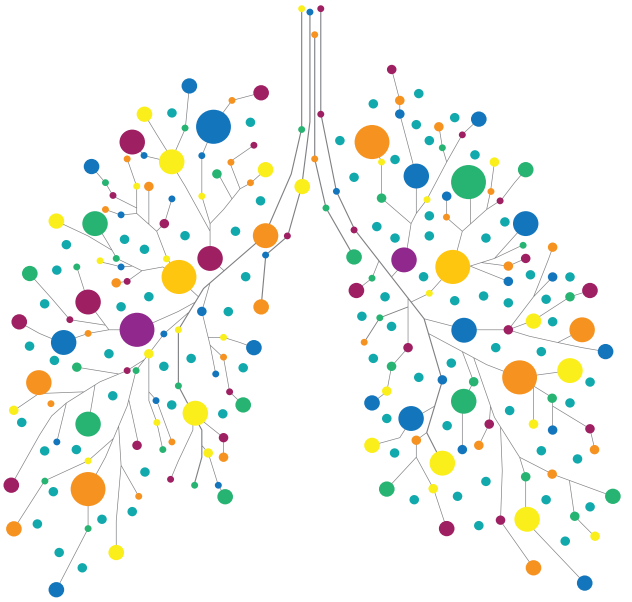
Preterm Birth May Up Risk for COPD

An international group of researchers has found a potential new risk factor for COPD: premature birth. In a study involving data from 11 previous studies conducted among 935 subjects who were born very preterm or with very low birthweight, along with 722 who were born at full term, they found those born preterm were four times more likely to have troubling air-flow restrictions in early adulthood than those born at full term. The finding was worse for those who experienced bronchopulmonary dysplasia as newborns, as well as those with a history of exposure to tobacco smoke or other pollutants.

"The reductions in their air-flow capacity in adolescence and early adulthood were substantial, and a significantly higher proportion had expiratory flow rates in concerning clinical ranges compared with those born on time," said study author Lex Doyle from Murdoch Children's Research Institute in Melbourne, Australia. "Physicians should obtain a perinatal history, including gestational age at birth, birthweight, and bronchopulmonary dysplasia, when assessing adults with airway disease." The study appeared in *The Lancet Respiratory Medicine*. ■

HAIR-SIZED PROBE GOES TO WORK IN THE LUNGS

A team of scientists supported by a grant from the U.K. Engineering and Physical Sciences Research Council has developed a probe they believe can provide important information on the body's reaction to disease processes inside the lungs. The tiny probe consists of an optical fiber about 0.2 mm in diameter and holds 19 sensors, each of which can measure indicators such as acidity and oxygen levels deep inside the lung tissues. The investigators believe the technology may be applied to other regions of the body as well to help clinicians better understand inflammatory and bacterial diseases. They outlined the device in a recent paper in *Scientific Reports*. ■



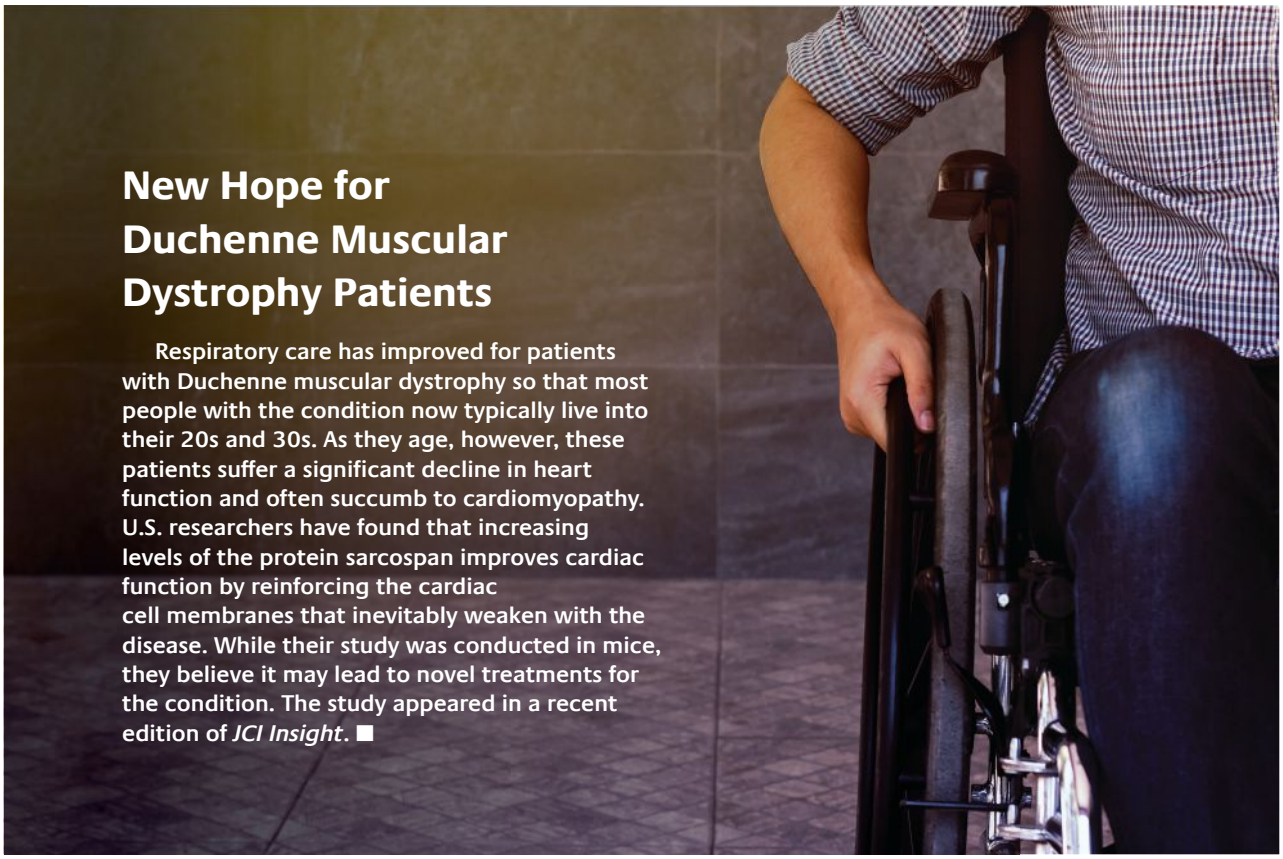
NEW WAY TO FIGHT TICK-BORNE ILLNESS

An experimental influenza drug called favipiravir has effectively killed a newly identified tick-borne virus in mice. The Bourbon virus, so-called because the first of three known human victims of the virus lived in Bourbon County, KS, causes severe flu-like symptoms. Two of the three victims died of the disease.

In this study, researchers infected mice with the virus, using a strain of mice with weakened immune systems because healthy mice were able to fight off the virus. All of the immunocompromised mice died six to eight days after they were injected with the virus. The investigators then treated other infected mice with the flu drug or a placebo for eight days. When the mice were given the antiviral at the same time they were infected or within one day of becoming infected, all survived without becoming visibly ill. None of the infected mice that received a placebo survived. When the researchers gave the antiviral treatment three

days after infection — a time when the mice already looked sick and had lost weight — all of the treated mice recovered.

Favipiravir has been approved for use in Japan but has not yet been approved by the FDA. The study was published in *PLOS Pathogens*. ■



New Hope for Duchenne Muscular Dystrophy Patients

Respiratory care has improved for patients with Duchenne muscular dystrophy so that most people with the condition now typically live into their 20s and 30s. As they age, however, these patients suffer a significant decline in heart function and often succumb to cardiomyopathy. U.S. researchers have found that increasing levels of the protein sarcospan improves cardiac function by reinforcing the cardiac cell membranes that inevitably weaken with the disease. While their study was conducted in mice, they believe it may lead to novel treatments for the condition. The study appeared in a recent edition of *JCI Insight*. ■

Sleepiness Has a Genetic Component

Could excessive daytime sleepiness be all in a person's genes? According to a multi-ethnic study led by investigators from Brigham and Women's Hospital, the answer may be yes. They identified four sites of DNA methylation, the most commonly studied epigenetic marker, that were associated with sleepiness: one across all race/ethnic groups and three among African-Americans. When the team looked at only African-American participants, they found 14 DNA methylation sites associated with sleepiness, some of which were found in genes that have been previously reported as associated with sleep traits. The good news is, epigenetic markers can be influenced by both environmental and genetic factors, suggesting they may be modifiable. The study appeared in a recent edition of *Sleep*. ■

Strange but True…

Sweet treatment: An international group of researchers working with a mouse model has uncovered two ways sugar might play a role in treating lung disease. First, blocking sugar receptors in the lung could reduce inflammation in chronic conditions such as asthma and allergies. Second, inhaling sugar solutions could boost the immune response to some infections. The finding is based on their discovery that macrophages in the lungs need correct levels of glucose to function properly.

Soak it up: University of Florida investigators are working with local governments and others to install a new type of pavement that can absorb pollutants rather than let them slide off into the environment. These "permeable pavements" trap and filter the pollutants and are considered one of many tools in sustainable urban development.

All about the oxygen: Aquatic or gliding animals typically have webbed fingers, while those that live on land do not. New research from Japan suggests oxygen drives the difference. The scientists found some animal species detect the presence of atmospheric oxygen during embryo development, and that triggers the removal of interdigital webbing.

Calendar of Events

AARC & State Society Programs

September 3–6, 2019
Myrtle Beach, SC
2019 SCSRC 48th Annual Conference
Contact: program@scsrc.org or
www.scsrc.org

September 11–13, 2019
Ocean City, MD
The Carousel Hotel & Resort
Contact: jennifer.mcgrain@gmail.com or
http://www.conferencebythesea.net/

September 17–18, 2019
Kapolei, HI
46th Annual HSRC Conference Disney – Aulani Resort
Contact: hawaiircps@gmail.com or
www.hawaiircps.org

September 17–18, 2019
Meredith, NH
VT/NH Society for Respiratory Care Conference
Contact: jlexilus@gmail.com or
https://www.facebook.com/vtnhsrc/

September 18–19, 2019
Morgantown, WV
WVSRC Fall Health Care Conference 2019
Contact: cynthia.keely@gmail.com or
www.wvsrc.org

September 27, 2019
Fredericksburg, VA
Neonatal-Pediatric Conference
Contact: b.brooks233@gmail.com or
www.vsrc.org

September 26–27, 2019
Bowling Green, KY
2019 Making the Connection
Contact: ksrcweb@gmail.com
or http://www.kentuckysocietyforrespiratorycare.org/2019conference.html

---

Advertiser Index

Recruitment Display Advertising Information & Requirements:

For Recruitment Display Ad Rates, go to http://www.aarc.org/resources/publications/media-kit/ or contact AARC Respiratory Jobs • Respiratory.Jobs@aarc.org (972) 243-2272 • Fax (972) 484-2720 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063

Mother Knew Best

by Tamara McCabe Halvorson, BA, RRT, RRCP

Back in 1974, my mother, who was dissatisfied with my inability to find a job after I had graduated from college with a BA in sociology, signed me up for a one-year respiratory therapy technician course. I had no idea how my life would change after I finished that one-year course. Respiratory care became my calling in life. I joined the AARC in 1981. By the end of 1982, I was a Registered Respiratory Therapist.

Oh, the things I have seen in my professional career! While my first passion was caring for patients with COPD, my true calling ended up being caring for patients in adult critical care. I saw mechanical ventilators change from the very basic MA-1 to state-of-the-art devices that could be fine-tuned to the patients' needs. I also saw the advent of piped-in oxygen — no more jockeying oxygen tanks. I went from "Where's the RT girl?" to "Call the respiratory therapist." I saw the respiratory care profession grow from being largely treatment-centered to being more protocol-driven, with greater use of critical thinking skills for respiratory therapists.

about the author...

Tamara McCabe, Halvorson, BA, RRT, RRCP is enjoying her retirement in Wyndmere, ND.

Memorable patients

My most wonderful memories are of the patients whom I met during my professional career.

There was the pediatric patient who was short of breath with audible wheezing. The nurse immediately went to get some medication, leaving me in the room with the small child and the very concerned parents. I got the nebulizer treatment ready and started coaching the child and did a little education at the patient's bedside. The reward was in the comment the child made to the nurse when she came running back with the medication: "I don't need anything — the respiratory therapist fixed me."

There was the elderly patient with restless leg syndrome who had a panicked look on her face when I entered the room because she couldn't stop her involuntary movements. I remember quietly asking how I could help, and when she asked if I could say a prayer with her, I did. The involuntary movements stopped, and we went ahead with her nebulizer treatment. I will never forget her quiet whisper as I left the room: "Thank you so very much."

And then there was the patient I worked with who was kind of scary looking. He had been referred to me because he qualified for pulmonary rehabilitation. He had long hair and a beard and a really grumpy outlook on life. One day, he was in the middle of his exercises when he said to me, "I wish I could breathe better." Without even thinking, "I said, well if you could cut your hair and shave your beard you might be able to breathe better." He said, "Right!" And we laughed! A few days later I was paged to come to pulmonary rehab — stat! As I hurried down there, I was thinking, "Now what?" I walked into the room and the patients and staff were all sitting there just waiting for my reaction. Turns out the patient had mentioned his hair and beard to his daughter-in-law. She got out the scissors, cut his hair, and shaved his beard off. I asked, "Well, did it help?" and he said, "You know, it did." Over his time in pulmonary rehab, his FEV_1 increased by 50% and he went on to have a lung transplant. You just never know how you might affect someone's life. His whole outlook changed. (continued on page 120)

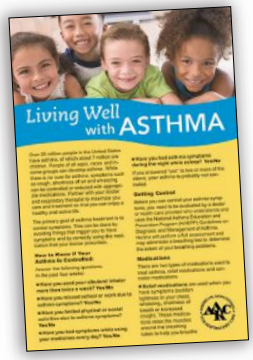
Promote Respiratory Health and EDUCATE PATIENTS

Great for RC Week Handouts!

Respiratory handouts to share with patients, at health fairs or presentations

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

ALLERGIES
Tip sheet: BR0007N



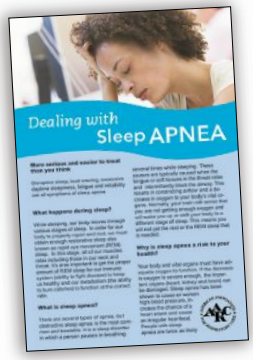
ASTHMA
Tip sheet: BR0005N
Bookmark IQ Card: PE0007

SMOKING AVOIDANCE
Tip sheet: BR0014N

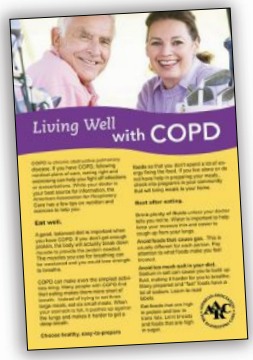
SMOKING CESSATION
Tip sheet: BR0009N
Bookmark IQ Card: PE0009

Order Today!

SECONDHAND SMOKE
Tip sheet: BR0008N
Bookmark IQ Card: PE0010



SLEEP APNEA
Tip sheet: BR0010N
Bookmark IQ Card: PE0008



COPD
Tip sheet: BR0004N
Bookmark IQ Card: PE0006

PEDIATRIC LUNG HEALTH
Tip sheet: BR0006N

Visit https://aarc.org/go/health-tips

Cutting edge in Fargo

As I noted earlier, though, my most rewarding days were spent in adult critical care and working alongside intensivists, medical residents, respiratory therapists, nurses, dieticians, and pharmacists. Some of the best of the best worked in that critical care unit. I rounded daily with the critical care team and felt that I was respected and had an opportunity to contribute to each patient's care. As I gained experience, I could walk into a patient's room in the ICU and know instinctively what changes needed to be made to the mechanical ventilator. This ability thoroughly frustrated the medical residents I rounded with on a regular basis. For many, it was their first experience working with a respiratory therapist.

I believe to this day that while there is a science to mechanical ventilation, there is an art as well. I believe this applies not only to mechanical ventilation, but to the entire profession of respiratory care. This is not something that can be taught; it can only come with experience. I learned an awful lot about total patient care rounding on that team. We pioneered many new therapies and strategies to care for patients. There was no cutting-edge strategy that we were afraid to try, and the work we did was amazing because we were in Fargo, ND, in the hospital currently known as Sanford Hospital. I relied on Respiratory Care, AARC position statements, etc., for the help I needed when it came time to try out those new strategies.

As a respiratory care manager, it was my job to write policies, bring in new equipment, and implement and educate respiratory therapists, nurses, intensivists, and medical residents on new equipment and strategies for patient care. I did not believe in asking staff therapists to do things that I was not willing to do myself.

I don't believe respiratory therapists should have to punch a time clock or be treated like worker bees. They are professionals. I was never a manager who just sat in an office; I was in that ICU and on those patient floors. I truly loved the job.

AARC made a difference

As I mentioned earlier, I have been a member of the AARC since 1981. I joined my professional society 38 years ago, and I continue to be a member today. Whenever I needed a resource to write policies, justify numbers of respiratory therapists in a respiratory care department, or answer everyday questions related to respiratory care, this resource was invaluable. I do not believe that you can be serious about being a professional respiratory therapist and not be a member of your professional society.

Tamara McCabe Halvorson credits her mother with leading her into a rewarding career in respiratory care.

I was involved with my profession at the state level early in my career. I held numerous offices and helped in state society efforts to pass state legislature. I also served on the North Dakota State Board of Respiratory Care for two six-year terms.

A risk that paid off

While I am now retired, I have yet to give up my North Dakota license and I continue to obtain CEUs. You see, I don't know that I am finished with this career yet. I think it all goes back to my mother. She was a Cadet Corps Registered Nurse in World War II who was widowed at the age of 39 with six children. She is almost 95. It was a risk for her to spend that $300 on a Respiratory Therapy Technician course for her eldest daughter, but she did. She told me I could be anything I wanted to be, and I believed her. ■

A Full Spectrum of Ventilation Monitoring Solutions

Effective Airway and Gas Monitoring

Masimo offers a complete portfolio of **NomoLine® capnography and gas monitoring solutions**, both sidestream and mainstream, to meet the challenges of ventilation and gas monitoring across multiple clinical settings.[1] In addition, Masimo also offers a continuous and noninvasive sound-based respiration rate monitoring method, **rainbow Acoustic Monitoring®**.

Capnography-enabled Masimo devices need virtually no warm-up time, provide full accuracy performance in ten seconds, require no calibration,[2] and benefit from the unique moisture-wicking technology of NomoLine sampling lines, helping clinicians streamline workflows.

Learn more at

masimo.com/capnography

Masimo

Visit us at booth #327 at AARC Congress 2019 in New Orleans, LA.

[1] Products shown may not be available for use in all care areas. [2] For complete specifications, including measurements, see Operator's Manual.

Caution: Federal (USA) law restricts this device to sale by or on the order of a physician. See instructions for use for full prescribing information, including indications, contraindications, warnings, and precautions.