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Bob Kacmarek Receives the 2018 Garza Award

International Respiratory Care Update

Bob Kacmarek, PhD, RRT, FAARC, FCCM, FCCP, received the Héctor León Garza MD International Achievement Award last month for his contributions to international respiratory care.

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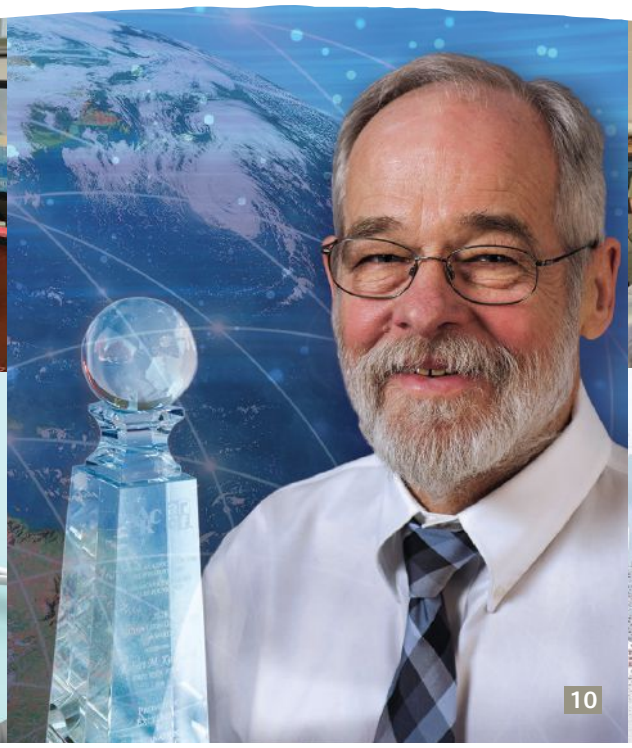

AARC Strategic Plan

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

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

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1. Barto T, et al., Registry outcomes for HFCWO vest therapy in adult patients with bronchiectasis, Am Thor Soc Ann Meet, San Francisco, CA, May 2016, Poster P1496.

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AARC Times Converts to Digital-Only Format in January 2020

The line it is drawn
And the curse it is cast
The slowest one now
Will later be fast

As the present now
Will later be past
The order is rapidly fadin'
And the first one now will later be last

For the times they are a-changin.'

The Times They Are a Changin'

by Bob Dylan

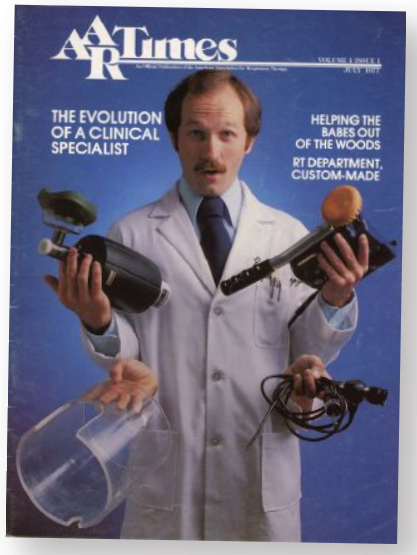
As you find yourself reading this article today, not much has likely changed for you. Perhaps you've picked up the magazine from the breakroom table at work, or perhaps you're enjoying it over a nice cup of joe on a Saturday morning sitting in front of the fireplace. Or maybe you're sitting at your work desk reading it while grabbing a bite of the chicken salad sandwich you packed for lunch. While your routine for reading this month's articles in *AARC Times* may not have changed, the same cannot be said for the magazine itself.

A little bit of history

In 1971, there was a well-reasoned move afoot to restructure the editorial posture of the Respiratory Care journal. The objective was to reflect the "science" of the profession more appropriately. This is exactly what happened during the able stewardship of long-time editor Philip Kittredge, RRT, with Respiratory Care emerging as a preeminent monthly science journal of our profession.

But what about the art of respiratory care? By 1976, it looked as though the broad dissemination of social, economic, and political news about the respiratory care profession would be left to proprietary publications simply by default. "The Bulletin," the Association's monthly newsletter, was just that — a newsletter. It was primarily an Executive Committee/Executive Office vehicle for such items as membership lists, official announcements, and urgent news items. Its form and style were simply not suitable for the expansive editorial copy that had previously appeared in the journal. And thus *AARC Times* was born.[1]

A lot has happened since that first issue was published in July 1977. As the third managing editor of *AARC Times*, I consider myself fortunate as I look at a piece of history every day — the framed copy of that very first issue that hangs on the wall of my office.



Back then, the editorial staff consisted of three people: Managing Editor Robert Weilacher, Editor Mary Lynn Gage, and journalist and jack of all trades, Debbie Bunch. Debbie was the official staff writer, but her duties also included layout, typesetting, production, and editorial brainstorming. Some 41 years later, you'll still find her writings published in the magazine — and yes, you'll even find her work in this issue as well.

Current *AARC Times* Editor Marsha Cathcart has also been with the publication since its infancy in the late 1970s, starting first as a production assistant

and then assistant editor before being handed the keys to the publication as editor in 1989.

Over the years, the magazine has been blessed with the continuity of these ladies, and I believe these stalwarts are a big reason for its success.

As you can imagine, like with all things, the magazine has evolved over the years. Gone are the days of typewriters and old typesetting machines; today we use Apple-based software that make magazine layout, editing, and design a much easier process. Back in the 1980s, photos were often touched up with colored pencils before being "cut and pasted" (literally) on a piece of cardboard before being fed into the typesetting machine. Today, website subscriptions like Stockphoto.com allow us to utilize professional stock photos without the need for a professional photographer. Software like PhotoShop allow our graphic designers to make edits to photos that can't be picked up by the naked eye.

And nine years ago, advances in technology and the digital revolution brought us our online "Digi Mag," a digital platform by which our readers could experience our magazine all from the comforts of their desktop, smartphone, or tablet. With that evolution also came a change in our dues structure, by which members could opt for a slightly more expensive membership where they would be mailed the hard-copy version of the *AARC Times* to their doorstep each month, or they could choose a slightly less expensive membership that offered those with a preference for technology to save a few dollars per year by accessing the magazine only online.

A shifting trend

Ironically, the very first issue of *AARC Times* was printed and mailed to more than 19,000 members. That's a far cry from the nearly 40,000 active members we have today. With that said, however, and because of the popularity and preference to engage with our content in a digital manner, there is an undeniable trend in which AARC members are now opting for digital access at a rate exceeding those who still want the magazine in print.

As you may recall, *AARC Times* sent out a comprehensive survey in the fall of 2016 seeking to better understand your reading preferences, how long you engage with the magazine each month, which columns you prefer to read, etc. With that information, coupled with the *Readex Survey* that our members are sent each year to better understand your views on advertising, we have identified a dominant trend. More and more AARC members opt for the digital membership. They like the convenience of digital content, its searchability, and the fact that it comes at a lower cost. And for those who are environmentally conscious, it's a "greener" solution than the print magazine. Our members also love that fact that the Digi Mag doesn't take up space on their shelf, and if they ever want to access an old article, it's easy to do.

Furthermore, our readers have told us that they prefer viewing advertisements in a digital format. Print ads are static… you're unable to engage with them. For those readers who want to learn more about a product, the information related to a digital ad is only a click away. Advertisers can also embed videos into their advertisements to make them more interactive. Advertisers also prefer digital advertising because of the ability to track analytics and click rates.

The decision

Take all of this information, merged with the information we already know about the behavior of our future members (Millennials and Gen-Z) and how they prefer to interact with content (educational, professional, or otherwise), and it was an easy decision for the Daedalus Board of Directors in July 2018 to discontinue the print edition of *AARC Times* effective Jan. 1, 2020.

Why Jan. 1, 2020? When people join the AARC or renew their membership, they do so in 12-month increments, meaning that any decision to discontinue the printed edition had to happen no less than 12 months before the actual transition. For example, if someone renewed their membership with the AARC in December 2018 and opted for print access to the magazine, we have an obligation to provide them a hard-copy version of the magazine through December of 2019. Starting Jan. 1, 2019, the "hard copy" option of the membership application will be removed. The only option

Managing Editor Douglas S. Laher, MBA, RRT, FAARC, provides a behind the scenes look at how and why the magazine is transitioning to all-digital content next year.

for new or renewing members will be for digital-only access.

Consumer sovereignty is a term defined by Merriam-Webster as "the economic power exercised by the preferences of consumers in a free market."[2] In essence, the decision to discontinue the print version of our magazine was not made by the AARC, but BY YOU through your wants, needs, and reading preferences.

Impact

Now, some of you might think that the AARC is taking away a member benefit. We are not. We are simply delivering the magazine to you in a singular, consistent, digital format. Some people might think that this is simply a way to save money. There is some truth to that, but not in the context you might think. When the AARC was printing 40,000 copies of our magazine, we enjoyed an economy of scale in which we received volume discounts on print and postage. As our members opted for digital access and our volume of print went down, so too did our discounts. As such, our cost per issue has gone up year over year for the last 10 years. By discontinuing print, it simply makes the monthly publication of the magazine more efficient. And when we become more efficient at what we do, we're able to deliver more value for your membership in other areas.

Enhanced experience

It's important that you know this decision was not made in haste. We know there are some members who place an extraordinarily high value on their print magazine. They like the tactile feeling of flipping pages and the ability to share the magazine with non-members or to leave it on the breakroom table. Some people have even shared with us they've got a library of every printed issue of the *Times* dating back to July 1977!

We knew there would be challenges in convincing these loyalists that they would continue to receive an exceptional reading experience. And we knew to accomplish that we would need to enhance our existing online Digi Mag… and enhance we did. Just three short months ago, *AARC Times* released Digi Mag 2.0… a new and improved digital platform that delivered readers with a more personalized reading experience. Instead of a flip-page experience where readers had to "expand and zoom" the content to fit on their phone or desktop, a responsive design now configures content in an easy-to-read fashion, regardless of device. We also made improvements to the digital graphics and artwork, and the magazine's table of contents is now delivered to you in an "article view" (or thumbnail) format, allowing you to easily target and access the articles of most interest to you — without having to flip from page to page. But there is good news for those loyal "page flippers": the new platform still has the functionality to do that — just select the "page view" option from the menu on the top left corner of the page.

We knew making this decision would be a challenging one that would not be popular with everyone. With that said, careful consideration was taken in analyzing the current climate, scouring the survey data, and reading each and every comment you left. We researched reading preferences of not only you, but readers in general. We painstakingly evaluated the impact of this decision with the sole focus on our ability to deliver to you a high-quality magazine of exceptional content, and we improved our digital platform to do just that.

If you're a digital member already subscribing to our *AARC Times* Digi Mag, we hope you enjoy your enhanced experience. If you're a paper reader who may struggle with this transition, we invite to you give it a chance… we're confident you'll love the new product! ■

Editor's Note: As we celebrate the magazine this year in the *AARC Times Rewind* column, we invite you to check out the AARC website for some of our articles from past issues. We hope you enjoy the trip back in time, and we look forward to your feedback about the new digital magazine.

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With Lawyer's Eyes

by Anthony L. DeWitt, JD, RRT, FAARC

Respiratory care is somewhat event-based. For example, an event happens, like a code, and a patient is intubated in the esophagus. Sometimes, bad results follow. The event is investigated, and lessons are learned. If things work out well, no lawsuit is brought. No institution or person is held accountable. We often think of this as a good thing, because no one wants the hospital to pay money for an event that, while it certainly did not improve the chances of survival, likely did not materially preclude that survival either.

But lessons learned are an important part of quality analysis, and the tendency to analyze bad events after the fact is one that often looks to juries more like an opportunity to pin the tail on the victim than a real attempt to improve quality. This is especially true where no plan of action is put in place to prevent a similar event from happening again. Of course, in most states, such "self-critical analysis" is privileged from discovery under normal rules.

Sadly, the events that will get a hospital or clinician sued cannot be known in advance and, in fact, often vary greatly from case to case. The failure to use a pulse oximeter in one case might be negligent, and in another case it might be no factor whatsoever. Likewise, a delay in starting an IV might be due to the patient's bad veins rather than the nurse's poor technique. Because such things are relative, it is important to recognize that when a clinician looks with a clinician's eyes, she sees anatomy and physiology. When a lawyer looks with lawyer's eyes, she sees deviations from policies and procedures that might benefit her client's case.

Not all clients are worthy of belief or remuneration, and not all lawyers are shysters looking for a quick dollar. But as my late Aunt Naomi used to remind me, it takes all kinds to make a world. And, in this world, we have lawyers who believe that if you died or suffered an injury it must be someone [else's] fault. Sure, you smoked for 30 years, but those squamous cells in your lungs were really due to a chemical used on a farm near town. Yes, you rear-ended that truck, but the brake lights must not have been working. Almost any tragedy — and the loss of even one human life is a tragedy — can be analyzed back to someone else's fault. So what if you picked up the lawnmower, while it was running, to use it as a hedge clipper and wound up losing three fingers? Surely that was because the manufacturer failed to put a "Do Not Pick Up While Running" warning label on the lawnmower.

Take a deep breath and relax. Most reputable, ethical lawyers do not think this way. They want to represent people who were truly injured and not someone who has filed six cases in the last ten years and has a comprehensive collection of cervical collars for all occasions. But while we hope for the best, we must plan for the worst. That is why it is important to look around your hospital and your department — and look with lawyer's eyes. See what a lawyer would see.

Suppose you are walking down the hall to do a treatment and you see a puddle in the middle of the hallway. While it is not your job to mop the floor, you should stand there and get someone to call housekeeping or maintenance and investigate both the puddle and the cause of the puddle. The extra time and care is necessary because taking a towel and mopping it up on your own will do no good if there is a leaky pipe above your head, dripping onto the floor. That won't fix the problem, it will merely

about the author...

Anthony L. DeWitt, JD, RRT, FAARC, is an attorney and a partner in the firm Bartimus, Frickleton, and Robertson, PC, and resides in Opelika, AL. He has also published two books and numerous legal journal articles. This article is not a substitute for legal advice.

delay its resolution. But, if you see a visitor spill some pop, taking 30 seconds to wipe up the spill is a good idea, knowing the cause.

And while it is certainly wise to put a "Wet Floor" sign out where the puddle is until it gets cleaned up, it is better, if you have the time, to stand there and warn people approaching. This because there are people who often do not see such signs until they are flat on their back. (If you doubt the wisdom of this, simply look around on any given day at all the people walking like zombies gazing into their phones. Videos on YouTube demonstrate spectacular failures as well).

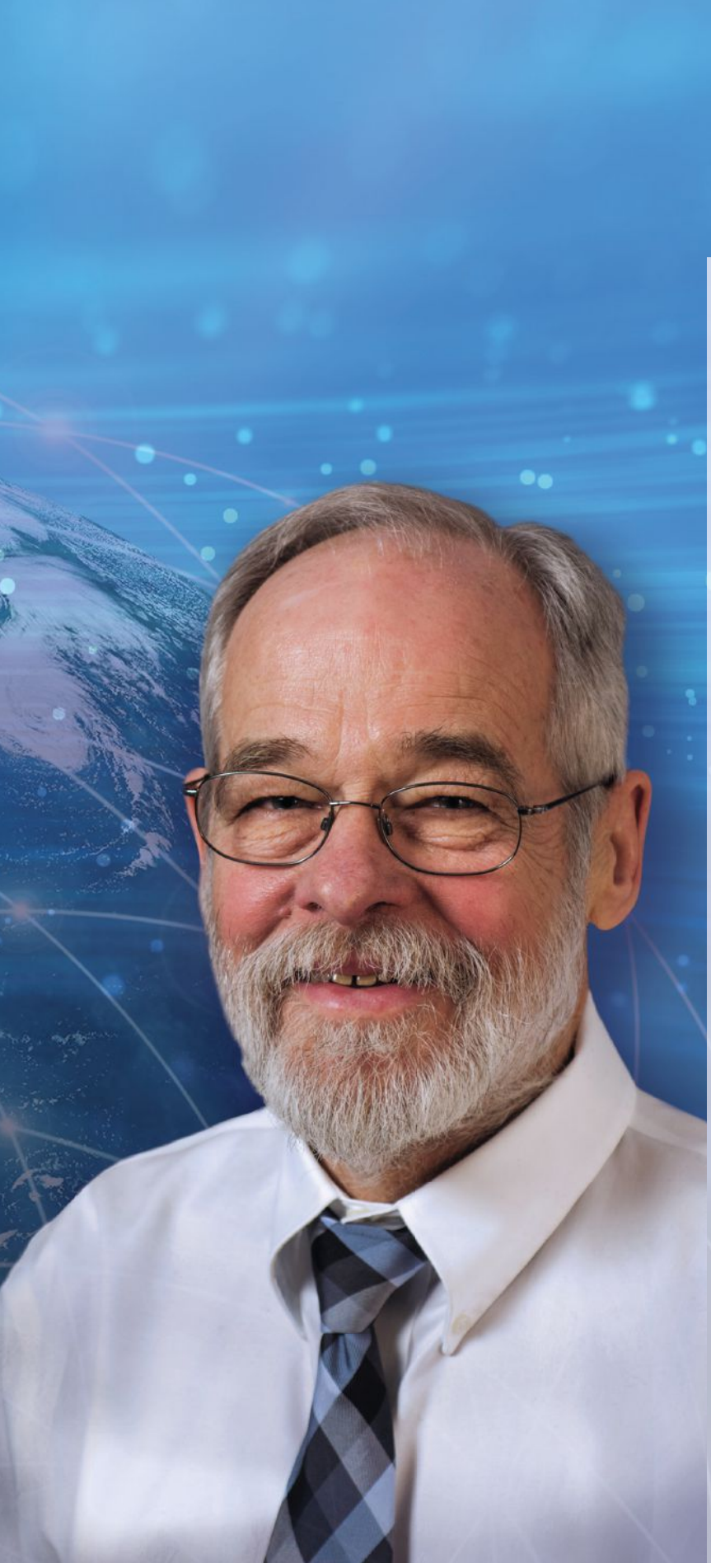
For the same reason, when a visitor stretches the power cord for his laptop or iPad across a pathway, you have to gently remind them that this creates a hazard if they leave the room and the patient needs to get up. I have frequently been amazed on hospital visits to see extension cords plugged into the hall outlets and snaking back into a patient's room. I've seen staff step over them and never say a word.

A hospital is not an insurer, and it does not have to guarantee that patients will be safe from every possible misfortune. A hospital does, however, have to provide against easily recognized hazards that can be easily remedied. And it has to have plans to safeguard patients in the event of predictable disasters (eg, tornadoes, fires, earthquakes, etc.). Having a staff that knows what to do and how to do it is important. It also protects the organization against litigation.

So, on your trek through the facility today, look out for those things that are dangerous, not only from a medical point of view (like a crash cart without a resuscitator bag), but also those things that are dangerous no matter where you find them (like wet floors, electrical cords, shoe salesmen, etc.). When you find these things, be a hero and do something about them. Your risk manager and your quality assurance person will appreciate it a great deal. ■

2018 GARZA AWARD WINNER *Embodies the Spirit of International Respiratory Care*

Bob Kacmarek has opened up important lines of communication between RTs here and their counterparts abroad



Patients all over the world receive respiratory care every day of the week. Thanks to Bob Kacmarek, PhD, RRT, FAARC, FCCM, FCCP, director of respiratory care at Massachusetts General Hospital, professor of anesthesiology at Harvard Medical School, and last year's winner of the prestigious Héctor León Garza MD International Achievement Award, more and more of those patients are benefiting from an open dialogue between U.S. RTs and their counterparts in other nations. In this interview, Dr. Kacmarek shares his take on the globalization of respiratory care, with a special emphasis on how it has affected collaboration between respiratory care researchers around the world.

■ Why do you believe it is important for the AARC to foster closer ties between RTs in the United States and respiratory clinicians from other countries, and what has driven your own personal passion for this international exchange?

We, as the largest and most developed respiratory therapy Association in the world, have an obligation, like all other similar medical groups, to foster the development of our profession in parts of the world where professional development may be delayed or slowed because of culture, finances, lack of personnel, etc. Remember, we are also a part of the global respiratory care community, not just the American respiratory care community. We need to share our experience, knowledge, and expertise to help others develop their respiratory care expertise to the same level as that available in the United States. At the same time, we can learn much from our international colleagues. The amount of research regarding respiratory care performed outside the United States now far exceeds that performed in the United States. It is through cooperative interactions and projects with others around the world that we can provide the very best respiratory care to our patients here in the United States.

I have personally been driven to support the development of international respiratory care because I have received so much from the international research fellows who have elected to come to Massachusetts General Hospital to work in my laboratory and be part of our clinical studies. Over the 50-plus years that I have been a respiratory therapist, I have had the good fortune to have worked with more than 40 international fellows and clinicians from outside the United States. From our collaboration, we have published more than 200 research studies. All these international fellows and clinicians have played an important role in the development of my career, and now I try to do all I can to foster their careers and the careers of other international clinicians involved in respiratory care.

■ How and why did you first get involved in mentoring these international researchers, and what do you believe are some of the key studies that have come out of these relationships?

Early in my career I was fortunate to meet individuals from Japan and Germany with whom I was able to develop collaborative relationships. From the work we did together, they believed it would be beneficial to send young research fellows to work with me in Boston. The individual to whom I owe the most for setting up these relationships is Jun Takazawa, a Japanese intensivist who had great vision and trusted that his young staff would benefit from spending time with me in Boston. In addition, all of us believed that having experiences in other countries not only makes us better health care providers but also better citizens of the world; it has an unbelievably beneficial impact on breaking down the boundaries and the biases that exist across cultures. Over the years, with the significant help of these international fellows, we have published a number of studies on liquid ventilation, tracheal gas insufflation, the epidemiology and management of ARDS, the performance and use of lung recruitment maneuvers, and, most recently, the management of severely obese hypoxemic patients in acute respiratory failure.

■ What has it meant to you to be able to guide these international investigators in the research process?

When you spend time teaching and helping to develop an individual's career, there is a bond that develops that is difficult to describe. They become like your children; you feel a sense of pride in everything they do and gain a feeling of comfort and peace in knowing that you were a part of their development and success. You want to see them continue to succeed, to become independent, and actually to be better than you, just like you desire with your children.

> "I have had the good fortune to have worked with more than 40 international fellows and clinicians from outside the United States."

You have also lectured on respiratory topics to more than a hundred groups and organizations around the world. What led you to embark on these travels to educate international clinicians on respiratory topics within your areas of expertise, and what have you learned in the process from attending these international events?

I have an innate need to explore and experience other cultures. As a result, I was and still am excited every time I have the opportunity to travel to other parts of the world. I still have that child-like curiosity to understand the differences that exist, not just in respiratory care across the world, but in the different cultures around the world. I believed then and still believe now that I have something beneficial to give to others. But I am always amazed by what I learn as well. Over the last 10 years, the international respiratory care community has developed and expanded to a remarkable level. Most importantly, I have developed friendships that have lasted, it seems like a lifetime, and I sincerely hope they will continue for a long time into the future!

■ You've been serving on the Respiratory Care Editorial Board since 1985. In the ensuing 30+ years, international submissions to the Journal have skyrocketed. How do you believe this "internationalization" of our Association's science journal has helped raise the stature of respiratory care as a profession around the world?

As I stated above, more research in respiratory care is being performed outside the United States than inside. Those outside the United States consider Respiratory Care to be the primary journal worldwide in which to publish their respiratory care–related research. In addition, Dave Pierson, Dean Hess, Ray Masferrer, and Rich Branson have continually promoted relationships with international respiratory care providers. Many of the reviewers for the Journal are "respiratory therapists" from around the world. This is both great for the Journal and great for the worldwide respiratory care community. Again, the worldwide respiratory care community is very rapidly developing, and the increasing level of international research published in Respiratory Care is simply a manifestation of that development.

■ What would you most like U.S. RTs to understand about the differences and similarities in the way respiratory care is practiced here in the United States and the way it is practiced abroad, and why is it important to foster this greater understanding?

There are many similarities; the scope of respiratory care in most settings is similar to that in the United States, although there is less extracorporeal membrane oxygenation and air transport of critically ill patients than in the United States. In many settings, respiratory therapists are able to function by protocols, thus independently determining patient-care plans. This is most well developed in the care of chronically ill patients. In a large part of the world, the respiratory care provider is a physical therapist specializing in respiratory care. The educational level of the international respiratory therapist is greater than that in the United States, and in many countries that has led to a greater focus on research than what we see from the average respiratory therapist in the United States. In every country that I am aware of, the minimum entry level academic credential to practice respiratory care is a baccalaureate degree, and in many settings where respiratory care is provided by physical therapists, bedside respiratory therapists have master's degrees and PhDs.

■ U.S. therapists sometimes think the main value of the AARC's international efforts lies in developing U.S.-style respiratory care professions in other countries. How would you respond to that mindset?

I believe it is inappropriate to try to force fit what works in the United States on other countries, or for any culture to force their approach on others. The cultures and medical care system needs of other countries are vastly different from that of the United States. Each country needs to develop a respiratory care profession that fits the unique needs of that country. We should be there to provide guidance and assistance and help them learn from our successes and failures, but never to force our version of respiratory care on them.

■ What did you think when you learned you would be the 2018 recipient of the Garza Award, and what would you like your fellow therapists to know about the importance of international research and collaboration?

When I heard that I was to receive the 2018 Garza Award, I was very surprised, but I also felt humbled and honored that my profession would select me for this very prestigious award. I must admit, I never expected I would receive this award.

To be a professional respiratory therapist requires an open mind, the willingness to constantly change as new evidence is provided, and the desire to collaborate with others. The world is getting smaller and smaller every day, making it easier to collaborate with individuals anywhere in the world. We are not the only group advancing respiratory care; groups all over the world are improving the quality of respiratory care. The more we collaborate with our international colleagues, the better patient care we will provide and the richer will our professional lives become! ■

Respiratory Therapists Are All Over the Map

What's it like to be a respiratory therapist in Colombia? In Taiwan? In India? In Ecuador? In England?

Turn the page to read five stories by therapists in these countries. We think you'll see that RTs really are just about everywhere these days, and the work they are doing to help people with respiratory conditions makes us proud to call them our colleagues.

My Life as an RT in Ecuador

Raul Castro Garcia, RRT, Mg

I live in the city of Guayaquil in the southern zone of Ecuador with my wife Glenda Olea, and my daughters, 18-year-old Melanie and 11-year-old Danna. I work from Monday to Friday, and then on the weekends we spend time together as family or go to the movies or the park or other different places. On Sundays I dedicate myself to sports, particularly soccer.

I began my studies in respiratory therapy in 1991. At first, I did not know anything about the profession, but as my studies progressed, I was surprised by how amazing it was and how it related to so many different areas of care — hospitalization, critical care, neonatal care, pulmonary function, pulmonary rehabilitation, home care, and the sale of medical equipment.

The hospital where I work is four stories high, and our adult hospital has 600 beds. We offer all the adult specialties, along with gynecology and neonatal care. I work in the coronary unit, where we see post-operative patients who have undergone cardiac surgery. We also see patients with heart attack, heart failure, hemodynamic derivatives, pacemaker placement, pulmonary hypertension, and cardiac arrhythmias.

Garcia with wife Glenda Olea, daughters Danna (left) and Melanie, and their pup, Jani.

This is the current class of RTs at the University of Guayaquil.

I am also a professor at the school of respiratory therapy at the University of Guayaquil, where I direct professional training and teach students to carry out field work. I help them plan visits to communities to give talks on respiratory health and assist them as they engage in other training activities.

When I get in to work in the morning, the first thing I do is receive a report from the colleague on duty, and then I visit with the doctors in the hospital. We have five beds in our unit and must review the pulmonary and cardiac components of our patients' care. We formulate plans according to established guidelines. Our biggest challenges are to withdraw the endotracheal tube and initiate noninvasive ventilation as quickly as possible and to avoid intubation in patients with acute pulmonary edema.

Ecuador

During the medical visit in the morning, when I am asked about the care I have delivered and the suggestions I have going forward, I know my work is well valued.

We often see patients who challenge our abilities. For example, one male patient, age 52, with a history of morbid obesity, type II diabetes, hypertension, atrial fibrillation, and asthma, had been in the coronary unit for 10 days for assessment. His echocardiogram revealed pericardial effusion, and a simple chest tomography demonstrated left pulmonary effusion. We knew that if we performed a pericardial window, we would have a left chest tube to drain. Gasometry hypoxemia was also noted, and noninvasive ventilation was therefore initiated to increase oxygen in the blood. The patient ended up spending 15 days in the coronary unit, treated with oxygen by mask, two puffs of ipatropium bromide every six hours, and incentive spirometry.

Garcia (left) works closely with his colleagues in the coronary care unit.

Raul Castro Garcia is a respiratory therapist in the coronary care unit at Dr. Teodoro Maldonado Carbo Hospital in Guayaquil, Ecuador, and a professor at the school of respiratory therapy at the University of Guayaquil.

We had another patient, age 40, who entered our hospital for aortic valve change, antecedent to bacterial endocarditis. The patient underwent surgery and in the post-operative period developed suture-site dehiscence. He ended up on mechanical ventilation for 15 days with a tracheostomy under the sedation and analgesia.

The affective part of health care can often be just as important as the scientific part. I believe it is my job to provide my patients with care based on knowledge, experience, quality, value, and humanism, with the objective that they recover as soon as possible. My best reward of any day is when I know I have benefited my patients. ■

My Life as an RT in India

Ramesh Unnikrishnan, MS, CRT

My wife Athira and I live in the college town of Manipal, located in Karnataka, South India. I am an only child, and my parents live in the neighboring state of Kerala. Outside of work, I love being physically active. I go for a run, play badminton, do some weight training, or sometimes just have fun at a weekend indoor football game with my friends, or exploring different places.

Getting into respiratory therapy was an accident for me. I was interested in joining the armed forces or pursuing human biology. My parents were not keen on me joining the armed forces, so I was left with the option of pursuing human biology. I did not know which course to select, but I was sure that I wanted to understand the functioning of the human body and know how to treat it if a problem arose.

Ramesh Unnikrishnan (top center) and his current colleagues.

Teaching ventilator graphics to medical residents.

We narrowed the choices down to the medical and allied health fields. I didn't score well enough to go into medicine, so I began looking at allied health. Two courses were familiar to me: physiotherapy and speech-language pathology. I chose physiotherapy. I was with my father at the admission counseling process held at the Manipal Academy of Higher Education (MAHE) when a video playing in the hall caught my attention. I was inspired by the work done by the health professional in the video. The title of the professional caught my attention, too: respiratory therapist.

I made a quick decision and changed course from physiotherapy to respiratory therapy. At that time, I had no way to know that the video was from the AARC. My father asked me why I chose it, and I said the course matched my interest. This is how I started my training in respiratory therapy. My friends, teachers, and elders helped me stick with it.

I began my career as an "academician cum clinician" in the School of Allied Health Sciences at MAHE. I worked in the tertiary hospital attached to the university, a 2,032-bed facility with multiple ICUs and medical specialties. I was assigned to the adult ICU, where I worked closely with the intensivist anesthetist, internal medicine consultants, trainees, fellow respiratory therapists, and students. I supervised the respiratory care plan for patients admitted to the ICUs (approximately 10 patients a day). I was also part of the rapid-response team charged with resuscitating patients throughout hospital.

It was during my medical ICU rotation that we had a patient who was suffering from severe ARDS after a road traffic accident. The physicians were finding it difficult to ventilate him, and — to my surprise — they asked for my suggestion. I suggested using the airway pressure release ventilation mode. They were hesitant to use it because of their past experiences with it. I pulled up an article written by R. Chatburn et al., discussed the findings with them, and convinced them that it was safe to consider. They gave me one day to prove my assumptions. I initiated the settings and continued to monitor the patient. To everyone's surprise, his blood gas report revealed significant improvement. The physician smiled and thanked me. That was indeed a proud moment. I was even happier to find out that the patient was discharged from the hospital with no significant issues.

Today, I work as an administrator and academician with little — in fact, no — clinical work. My typical day starts with prioritizing the tasks given to me by the dean during the beginning of the school year. Next comes the business of problem solving and day-to-day functions of the department. During the afternoon, I check the tasks given to the faculty and ensure that a workflow is maintained. Some days, I prepare for classes or visit the clinical area. Through my work at the university, I interact with intensivists, emergency physicians, pulmonologists, and anesthesiologists. They encourage our students and involve them in the decision-making process.

I was invited to join the cardiopulmonary resuscitation committee, where I work with team members to provide feedback on the CPR policies and conduct mock code-blue calls. We are also involved with pulmonologists and cardiologists in providing care to patients diagnosed with or suspected of having sleep apnea, and recently the neurology department invited us to be part of their acute stroke care team.

This year the department of respiratory therapy at Georgia State University (GSU) and the department of respiratory therapy at MAHE have signed an agreement to transfer masters degree students to GSU, thanks in large part to an initiative undertaken by Doug

Gardenhire, EdD, RRT, RRT-NPS, FAARC, a clinical assistant professor at GSU. We also have two adjunct professors on our side, AARC President Karen Schell, DHSc, RRT, RRT-NPS, and Vijay Deshpande, MS, RRT, FAARC. They have helped us fine-tune our teaching and curriculum standards, and gain visibility in the global setting.

I wish I could thank all of the people who have molded me, but that list is probably impossible to compile. I am thankful for the support I have received from my parents, mentors, former professors, colleagues, friends, department secretary, dean, and university administrators. Interacting with my students is the biggest reward. I'm always surprised by the energy and enthusiasm they have. The overall atmosphere at MAHE inspires me and rejuvenates my passion for respiratory therapy.

Every day is challenging for me and gives me new opportunities. As an RT, I'm happy that every clinician gives our team an opportunity to be involved in patient care that makes a difference in the overall clinical care.

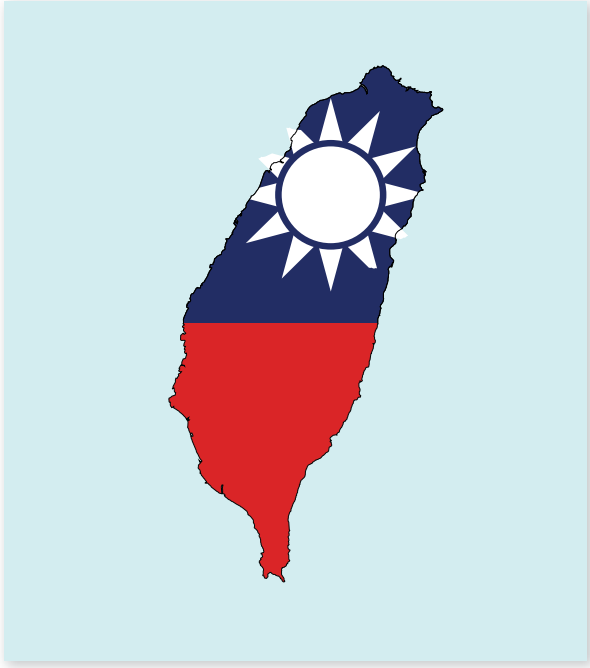
At the end of the day, I feel blessed. I have an incredible opportunity to meet the next generation of RTs, guide their careers, and make policies that have an impact on the learning and practice of respiratory care in the university hospital. Because this is the largest training center for RTs in India, I know that what I do also has an impact on therapists throughout the country. I love challenges and I wish to improve myself every day. I think respiratory therapy is one of the best professions for those who want to be in dynamic situations and face challenges every day. I have enjoyed evolving and learning all the nuances of being an educator, a clinician, and a leader. ■

Ramesh Unnikrishnan is administrator of the respiratory therapy department at Manipal Academy of Higher Education, in Manipal, Karnataka, India. He was an AARC International Fellow in 2015.

Ramesh Unnikrishnan with AARC President Karen Schell.

My Life as an RT in Taiwan

Chin Jung Liu, MSc, RRT



I started my respiratory therapy career in May 1985 after a four-month respiratory therapist training program at the Taipei Veterans General Hospital, a medical center located in the north of Taiwan with about 2,947 beds. In 1995, I transitioned to the Koo Foundation Sun Yat-Sen Cancer Center as the technical director of the respiratory therapy department. My main responsibilities were clinical work and administration of respiratory therapy.

At the same time, I completed the respiratory therapy technician program offered by the California College for Health Sciences, graduating in 1998. I graduated from the advanced respiratory therapist program in 2002. I also passed the Certified Respiratory Therapy Technician examination from the National Board for Respiratory Care in March 1999. I received an AARC International Fellowship in 2006, which allowed me to spend three weeks visiting with respiratory therapists in the United States and attending the AARC Congress. Those experiences really fed my vision for the respiratory care field.

The Taiwan Society for Respiratory Therapy was founded on April 1, 1990. The organization was renamed the Respiratory Care Association of Republic of China (RCAROC) on Dec. 19, 2004. Today we have 2,377 members. I was fortunate to serve as the sixth secretary-general of the RCAROC. Under the leadership of Chair Tu Mei-Lian and former Chair Chu Chia-Chen, we participated in the legislative process to support the profession in our country, finally passing the third reading of the draft respiratory therapist law on December 21, 2001. The law was implemented on January 16, 2002.

It was not easy to pass this legislation, so we set aside December 21 as Respiratory Therapist's Day in Taiwan to celebrate our accomplishment. After the legislation went into effect, everyone working as a respiratory therapist in Taiwan was required to pass the respiratory therapist certification examination given by National Examination Yuan in Taiwan, no matter how many years of experience they had or how old they were. I was proud to both take and pass the national certification exam.

We credited the exam to the efforts of our predecessors, who worked tirelessly to promote the respiratory care profession for more than 40 years in Taiwan. Respiratory therapists who originated from the formal educational system they established were finally recognized. The mission of the RCAROC remains to enhance professional excellence, promote quality respiratory services, improve respiratory-related academic research, and upgrade standards of respiratory education. The RCAROC has also established the respiratory therapist competencies ladder, which facilitates the upgrading of competencies for respiratory therapists.

John Hiser, MEd, RRT, FAARC, took part in RC Week activities at China Medical University in 2014.

Today I work at the China Medical University (CMU) Hospital. The hospital is near the school, which is located in Taichung City in the center of Taiwan and currently enrolls 6,375 students in seven colleges. The medical center has 1,665 beds. As the chief respiratory therapist in the department of respiratory therapy, I oversee 31 respiratory therapists who work in the ICU, respiratory care center (RCC), pulmonary rehabilitation room, and general acute ward. We typically have 150 invasive ventilator patients and 50 noninvasive ventilator patients every day.

The most important work we do is in the emergency department, the ICU, and the RCC. Patients on mechanical ventilation require our services 24 hours a day. The respiratory therapist will assess the patient who is in critical condition and requires immediate special care, such as measurement of weaning parameters, interpretation of chest x-rays, and data collection related to oxygenation and ventilation.

A physician leads the multidisciplinary team during a daily planning session.

Respiratory therapists are also charged with organizing information on their patients' respiratory conditions, including weaning profiles, and providing that information to the multi-professional team for use in establishing follow-up treatment plans. We assess our patients' respiratory response after aerosol therapy, chest physiotherapy, and other relatively routine work, such as ventilator circuit changes, which we do every seven days; ventilator-associated pneumonia bundle care; daily cleaning of the surface of the ventilator; and so on, which makes for a busy day.

In 2000, the Taiwan national health care insurance program implemented a prospective payment program for patients on prolonged mechanical ventilation, which offers multidisciplinary integrated care for the aggressive weaning of patients from mechanical ventilation.

In addition to my clinical work, I also serve as an assistant professor in the department of respiratory therapy at CMU, which was founded at the university in 2006. Given the advancement of respiratory therapist education, as well as new responsibilities for RTs in clinical work, there is much to do.

Taiwan

Chin Jung Liu is chief respiratory therapist in the department of respiratory therapy at the China Medical University (CMU) Hospital in Taichung City, Taiwan, and assistant professor in the department of respiratory therapy at CMU. She was an AARC International Fellow in 2006.

Daniel D. Rowley, MSc, RRT, RRT-ACCS, RRT-NPS, FAARC, joined RT students during graduation activities in 2018.

In my capacity as an assistant professor, I am responsible for the professional courses the students take and the internships they embark upon in the clinical hospitals. Novice respiratory therapists are trained by senior respiratory therapists, who evaluate them using mini-clinical evaluation exercises, direct observation of procedural skills, and case-based discussion. This ensures both students and novice staff possess knowledge, skills, and attitudes based on the patient safety-centered behavioral guidelines. Because external teaching hospital accreditation and teacher job promotion depend on the publication of research papers, I am also involved in respiratory care research.

When my students earn the respiratory therapist certification after three years of hard study, it is a wonderful time for a teacher like me. I especially love the fact that our graduates are able to go out and serve in life-saving capacities for the critically ill of Taiwan.

With the responsibilities that lie in the clinical, teaching, and research domains, I often have to stop and catch my breath. It is a constantly challenging job. ■

My Life as an RT in Columbia

Martha Milena Diaz, CRT, FAARC

For more than 30 years, I lived in Bogotá, the capital city of Colombia. A year ago I moved to Cali, the capital of the Valle del Cauca department in my country. It is a beautiful city of warm weather, full of birds of every color; in fact, it is one of Latin America's best bird-sighting locations. Cali is also considered the salsa capital. Salsa is a traditional dance in Colombia that I enjoy watching, even though I can't dance myself.

I live with two adolescents, my son and a cousin, and two dogs, both adopted. My parents are both retired and live on a farm that is five hours away from Cali in a town called La Plata. It is a place full of flowers and animals. My favorite hobby is to share weekends with them and to receive all the positive energy from nature and from my family. I have a younger sister, as well as a wonderful niece who really touches me. She was an extreme preemie at birth, and she reminds me that miracles happen.

My first contact with respiratory care was at an early age. I had a brother with a cleft lip and palate. My mother had to spend a lot of time in the hospital.

I understood very early that giving is much more grandiose than receiving, and that I liked to serve others because it fills my soul. These circumstances not only guided me, but also my younger sister, who is a pediatric dentist working with children with special needs.

I have worked in respiratory care for my entire career. I started working in pediatric and neonatal ICUs in different public hospitals in my country, and then I was a clinical teacher for two years. Four years ago, I started working with the Latin American Council for Certification in Respiratory Therapy in Colombia. Specifically, I work with the Latin American Board for Professional Certification in Respiratory Care (CLACPTER) and the National Board for Respiratory Care (NBRC), performing the certification of respiratory therapy exams throughout Colombia.

I have learned a lot through my work with CLACPTER and the NBRC, most particularly that certification exams are a tool for improvement that help establish minimum levels of performance. When respiratory therapy teams in hospitals decide to participate in a ranking, which in this case means measuring themselves against their peers in Latin America, they have the opportunity to know the level to which the objectives of the care of patients with respiratory diseases are fulfilled. The exam promotes quality and impacts management of the treatments that are being delivered to patients. It also encourages better practices and obtains elements for intelligent decision making that aim at sustainability through better practices.

I also work as an academic and research coordinator for Minerva Medical, a company with the mission to search for high-quality products, including those for respiratory therapy, that can help obtain the best possible health outcomes for Colombians. There I am involved in epidemiology, teaching, and leading our team. One of my duties is to search for valid scientific evidence that supports the use of new technologies arriving in Colombia and to share it with my team, which, in turn, shares it with health professionals of big and small cities around the country. Our team consists of 20 respiratory therapists.

On any given day, I may visit a hospital to promote the certification exam through the measurement of skills and knowledge made possible by CLAPTER-NBRC. This exam allows respiratory therapists to know their strengths — and their weaknesses so that they can work on them.

Sometimes I take a flight from Cali to Bogotá to visit a hospital, clinic, or university to deliver what was generously shared with me during my AARC International Fellowship in Washington, DC, and Baltimore, MD, in 2017. Or I might present on a specific topic at a conference, or visit an ICU that requires training in the use of a new technology or device for respiratory care, or I may simply spend the day reviewing scientific evidence, programming training sessions, and supporting my team with whatever they need.

Each day represents a new purpose; I always keep in mind that in the context of people who are ill or injured, we are of special importance. That is why we need to continue our academic growth.

At the end of the day, when I know I have shared, remembered, or promoted the development of respiratory therapists in my country, or when children, adults, or elders have benefited from a treatment or a new technology offered by our team, my objective

This sign welcomed Diaz to the United States when she came for her AARC International Fellowship in 2017.

This little boy receives regular visits from the Minerva team.

Columbia

Martha Milena Diaz is co-director of the Colombia Latin American Board for Professional Certification in Respiratory Therapy and an academic and research coordinator for Minerva Medical. She was an AARC International Fellow in 2017.

Martha Diaz, center, with team members from Children's National Medical Center during her 2017 fellowship.

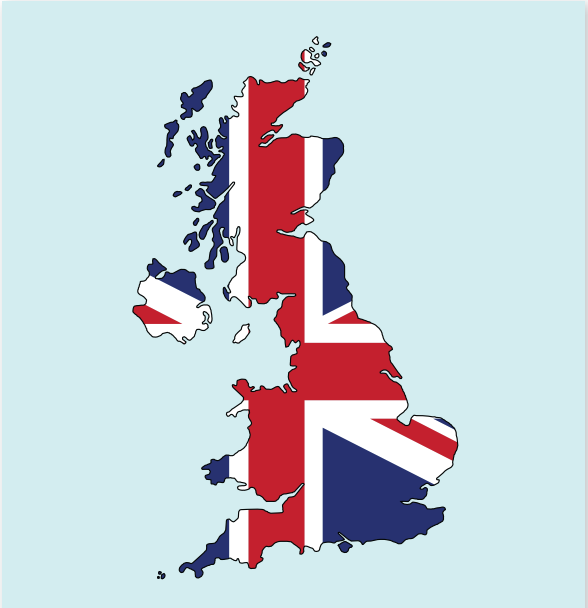
has been accomplished. And when respiratory therapy teams from big and small institutions in urban or rural settings decide to evaluate themselves through certification exams, I feel that my purpose of helping from different angles is progressing. Delivering information about the respiratory therapy profession to rural areas of the country is especially gratifying. Many Colombians working in the health care field are open and willing to receive information about our profession, in big and small towns alike.

I have many stories I could share, but two children who live in rural areas of my country have particularly touched my heart. Both require high-technology care to stay alive. Several times a year, they are visited by Minerva Medical, where our mission is to be present for the child and family every time we are needed. Everything is done through prevention and training. Families are taught everything concerning the appropriate management of the tracheostomy, cannulas and the use of closed suctioning. Prevention of cannula blockage and adequate suction with an emphasis on the need to do it as needed and not on a particular schedule are a priority. The proper use of metered-dose inhalers is also important. Transmitting the right knowledge to families gives them the security they need for their day-to-day duties with their loved ones.

At the end of the day, I feel grateful because I am always able to put something else into my professional bag — what was shared, the moments that were lived, and what I could do to help others. ■

My Life as an RT in the United Kingdom

Ron Taylor, CRT, RODP

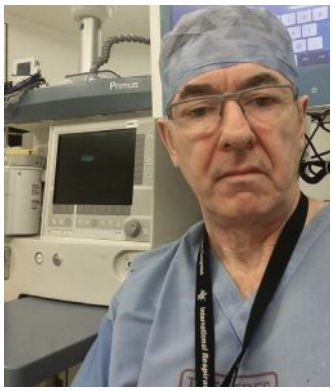


I am a certified respiratory therapist and a registered operating department anesthetic practitioner (RODP) in the United Kingdom. I am married to a lovely, very supportive Filipina. We have three grownup children — a daughter and two sons. My wife and I live in Hastings, on the southeast coast of the United Kingdom. I work away from home during the week as a travel therapist, and I see my family on the weekends. Agency work gives me more insight into various practices in anesthesia and respiratory care. At the moment, I am working at a Craigavon area hospital in Northern Ireland.

My life as a respiratory therapist started in Canada in 1981 when I was offered a position as an operating room technician in Vancouver, British Columbia. The job consisted solely of being a scrub technician, which was okay. But I soon began missing my skills in anesthetics, and the operating room manager could see this. So they transferred me to the respiratory

United Kingdom

Ron Taylor is a travel therapist in the United Kingdom. He was an AARC International Fellow in 2007.



Ron Taylor traveled the world in search of his RT career before finally ending up back home in the United Kingdom.

department, where I was employed as a qualified non-registered respiratory technologist. I stayed in this position for four years, until the regulations changed in British Columbia and RT registration was a legal requirement. So I left Canada and headed back to the United Kingdom, where I went back to anesthetics. But I was thinking to myself, "How can I get back into respiratory care work?"

Then, out of the blue, I was offered an anesthetic assistant position in Amsterdam, which was great, because my function there was similar to that of the CRNA in the United States. I lived and worked in Amsterdam for a year, then was offered work in Saudi Arabia at King Fahad Hospital, which was 20 km from Medina. There, in 1986, I got back to ICU work as a respiratory care practitioner. During my time there I achieved quite a lot, including the proning of a patient with ARDS, after an article I read by Dr. John Marini. The outcome of the proning was a great success. Since my time in Canada, I had developed a keen interest in all aspects of respiratory care, so I managed to improve many of the services surrounding the care of patients at King Fahad Hospital — in particular, weaning patients from mechanical ventilation. I stayed at King Fahad Hospital for about three years. During this time I met my wife.

Upon leaving Saudi Arabia, I went back to work in Holland — this time in Rotterdam — going back into anesthesia. I stayed there for six months, during which time my daughter was born. Following my six-month contract in Rotterdam, I returned to the United Kingdom, and my hunger for respiratory care work took hold again. I searched for a suitable position anywhere in the United Kingdom, but it was not yet the right time to conquer that country, so I went back to Holland to a small town called Waalwijk, again in an anesthetic role. I worked and lived there with my wife and daughter for more than two years, during which time my son was born.

My desire to practice respiratory care became overwhelming, and I decided to head back to Saudi Arabia. With my wife and two babies in tow, I got a job at Al-Noor Specialist Hospital, where I was offered the chance to work in the ICU. It seemed that my prayers were answered, because I was able to target all aspects of respiratory care. But on that side of Saudi Arabia — i.e., Jeddah, etc. — there were no RTs. They were all in Riyadh, so I was the lone ranger again. At Al-Noor I achieved good patient outcomes. I stayed at Al-Noor for two years, during which time my second son was born.

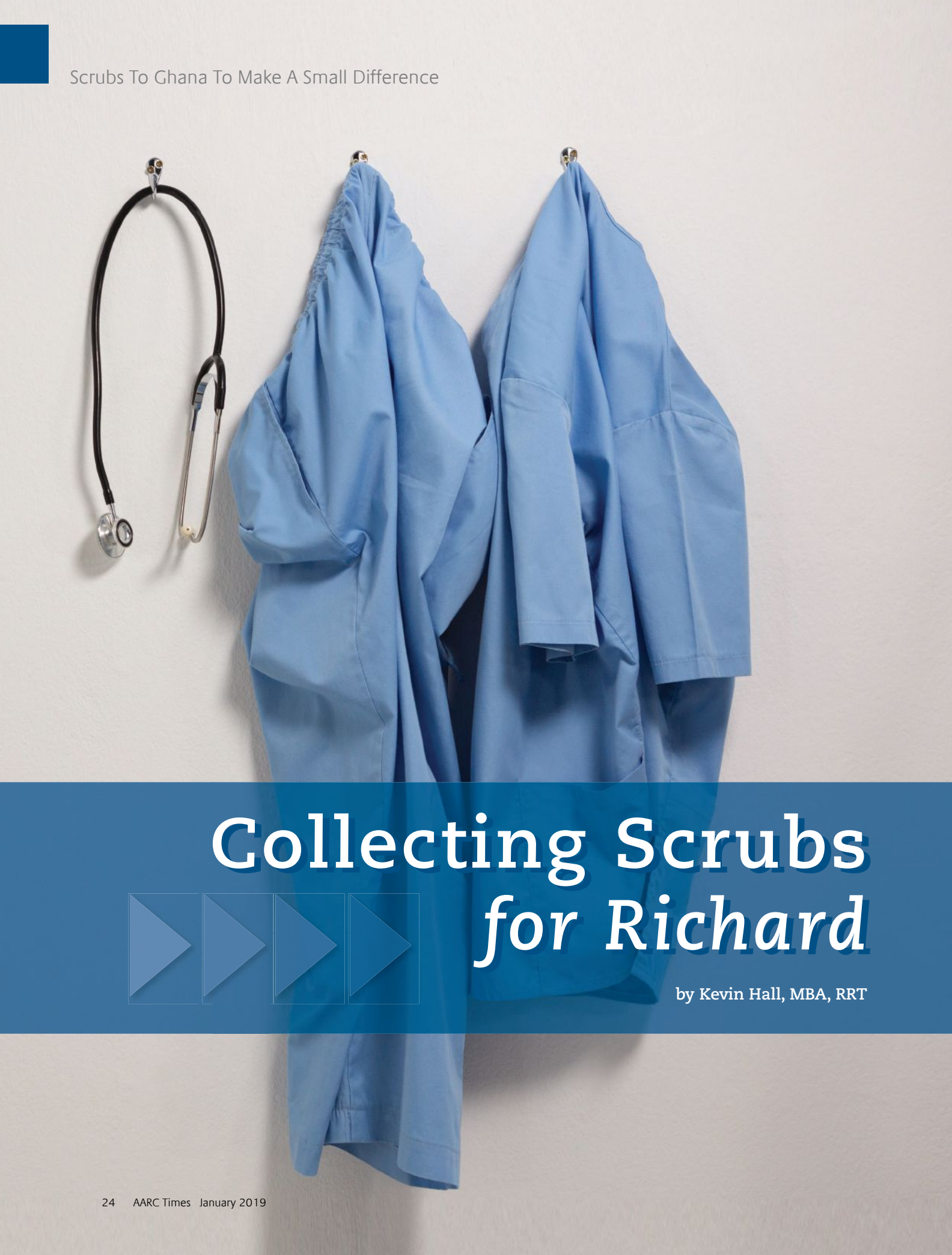
In 1993, I joined the AARC, and it was a blessing in disguise because I read an advertisement for the California College for Health Sciences (CCHS) distance-learning program for RTs in one of the Association publications. I applied, was accepted, and set straight out on the course, thanks to my mother, who helped with the funding. I started the course in 1993 but didn't complete it until 1998 due to difficulties with some of the finances, the long hours I was working, and family responsibilities.

After I graduated from CCHS, I arranged to sit for the NBRC CRT exam in New York. As I was checking in for the exam, one student RT asked me if there were any RTs in the United Kingdom. I replied, "Not yet." I dove into the exam and passed. That gave me the green light to hunt for a position in the United Kingdom. I soon spotted a job for an ICU technician, mainly setting up and maintaining all the equipment. I got the job, and not long into the role I found myself spending a lot of time teaching. This was at Newham General Hospital.

One day I was called to check a patient in the general ward who was receiving standalone CPAP. The chest physician commented that the patient was not doing well. So I stepped in and took a look, then told him that I was not surprised because the patient was on a CPAP mask but the PEEP valve was sitting on the window ledge. So I re-applied the PEEP valve and took over the care of the patient. I told the chest physician that he needed a respiratory therapist. I explained what an RT could do for his patients. It took 18 months to get the position approved.

As an RT at Newham, I set up the noninvasive ventilation service and also got difficult-to-wean patients out of the ICU. I weaned them successfully in the medical ward. The manager was very supportive, and when he moved to Watford General Hospital, he asked me to come, too. I remained at Watford General for 10 years, doing a great deal of work with noninvasive ventilation, COPD, asthma, VAP awareness, lung-recruitment strategies, and proning patients. I was also involved in enhancing education surrounding ventilation strategies.

All in all, I want to thank the OR manager back in Vancouver who first directed me to the profession of respiratory care. I would also like to thank St. Paul's Hospital in Vancouver, where I stayed for four years and gained the experience in respiratory therapy that shaped the rest of my career. ■



Collecting Scrubs *for Richard*

by Kevin Hall, MBA, RRT

When I first heard the quote, "Be the change you want to see in the world," I took it to heart and have tried to live it in my everyday life. I have always had an interest in helping people. My early experiences volunteering instilled in me a sense of empathy and compassion for others, which ultimately led to my career choice in the medical field. Working as a respiratory therapist (RT), I am able to help people with something so simple that most people take it for granted every day: breathing. Working as a respiratory therapist presented unique opportunities to help individuals, but I still felt unfulfilled.

Richard (left) was grateful for the scrubs relay organized by Kevin Hall (right).

A trip to the moon

In 2012, I presented my undergraduate research project at the AARC International Congress. Being a new graduate, I was a novice at networking, but I recognized this as a great opportunity to meet others in the respiratory therapy profession. During that conference, I attended a lecture titled, "Planning Your Trip to the Moon: Pursuing Unique Opportunities." I anticipated the talk would focus on futuristic issues in respiratory care, such as challenges astronauts or other space explorers might encounter, or how to breathe on a foreign planet. However, I was quite surprised when Dr. Lisa Trujillo began talking about a recent trip to Africa with her philanthropic organization, Charity Beyond Borders. She drew parallels between traveling to the moon and to Africa; she described how it was a completely foreign environment, and she at first had no idea how to prepare or what to expect. By the end of her talk, I had become so enamored with her presentation that I just had to meet her. I approached the stage and introduced myself. She gave me her email address and encouraged me to join them on their next trip to Ghana a few months later. Being keenly aware that certain opportunities only come around once in a lifetime, I couldn't help but be reminded of a quote from a favorite childhood movie, *The Sandlot*: "Everybody gets one chance to do something great. Most people hardly ever take the chance, either because they're too scared, or because they're unable to recognize it when it spits on their shoes. This is your big chance, and you should never let it go by...."

A mere six months later, in May 2013, I found myself boarding a plane destined for Ghana for a life-changing, month-long medical and humanitarian trip — and thus began my involvement with Charity Beyond Borders. Despite the despair and destitution that I encountered on that trip, I came back feeling revitalized and hopeful. During that trip, there was some discussion about the respiratory therapy profession being established in Ghana.

> Be the change you want to see in the world

Over the course of my time in Ghana, I got to know our driver, Richard, very well, and I still keep in close contact with him. Not a day goes by that I don't think about him. Since my return to the United States, I had been searching for opportunities to help Richard make a better life for himself.

A little over a year ago, in May 2017, I had the opportunity to travel to Ghana again with Charity Beyond Borders and a group that included Dr. Lisa Trujillo (program director,

Hall received a lot of help with the scrub relay from people across the United States.

The Ohio State University respiratory therapy students helped sort and repackage the scrubs for the relay.

RT students were happy to participate and make a difference.

University of Kansas Medical Center department of respiratory care and diagnostic science) and then AARC President-Elect Karen Schell (assistant professor, University of Kansas Medical Center department of respiratory care and diagnostic science). While collaborating on the trip, we discussed my idea to assist Richard.

Scrubs for Richard

I believed that we had a unique opportunity to help Richard by repurposing used scrubs. It was my initial intention to hold several scrub drives at the local Columbus hospitals where I worked. I started small, only requesting donations from my department, allowing my co-workers to donate their old scrubs (ones with torn stitching, missing pockets, small stains, etc.). I planned to give the collected scrubs to Richard, who could partner with a local tailor or seamstress in Ghana to help fix them up and sell them for a profit.

Relying on the notion that individuals would want to replace their donated scrubs with new ones, I thought trying to partner with a local scrub company could lead to a mutually beneficial transaction. I was fortunate to find a partner in a local scrub company, Affordable Uniforms, in Gahanna, OH, and had overwhelming support. Josh Vana, the store manager, informed me that Affordable Uniforms participates in a scrub drive semi-annually in which they offer discounts on new scrubs to customers who donate their old ones. This was precisely the type of exchange program I had envisioned! Affordable Uniforms offered me all the scrubs they collected — 14 large trash bags full of scrubs!

With the scrubs collected, I faced the biggest challenge yet; how was I going to get all of these scrubs half-way around the world to Richard? To make this undertaking feasible, I needed to find an inexpensive logistical option to get the scrubs from the United States to Ghana. I reached out to major shipping companies such as the U.S. Postal Service, UPS, and FedEx in search of solutions to this issue, but the exorbitantly high cost of shipping negated the positive effects of this venture. I had to get creative to find a solution.

The relay

I decided that the best way to transport these scrubs from my location in Columbus, OH, to Charity Beyond Borders in Ogden, UT, was through a relay. I thought the best way to accomplish this was to involve RTs from across the Midwest. However, before this could be done, the scrubs needed to be sorted and repackaged. Thanks to the hard work of The Ohio State University's respiratory therapy students, this task was accomplished with ease.

The scrubs were finally ready for the relay! The relay originated in Columbus, OH, where Dr. Georgianna Sergakis (program director of respiratory therapy, the Ohio State University) transported them to Jennifer McConnell, a friend located just east of Indianapolis. From there, the scrubs were taken to Effingham, IL, where there was another drop off, this time to Professor Monica Schibig (program

director of respiratory therapy, University of Missouri). She then took the scrubs to the final relay stop in Columbia, MO, where AARC President-Elect Karen Schell picked them up and transported them to Kansas. The scrubs were again re-packaged for travel to Ghana.

In the process of looking for shipping options, I came across a baggage-wavier program for charitable organizations offered by Delta Airlines. The program offered non-profit organizations up to 15 one-way pieces of luggage to be checked for free annually. Utilizing this opportunity even further minimized the overall transportation costs.

In total, the scrubs traveled over 713 miles in the United States and another 6,241 miles to reach the final destination in Ghana. This past June, the scrubs journeyed with the Charity Beyond Borders group and were delivered to Richard in Ghana. Richard was overcome with emotion and was extremely grateful for all those who helped to make this undertaking possible. Richard has been able to sell sets of scrubs for between 20–25 cedis (¢) per pair. As a frame of reference, by selling just one pair of scrubs, he is able to make enough money to buy 3 hot meals a day.

Monica Schibig (right) took the scrubs from Effingham, IL, to the final relay stop in Columbia, MO, where Karen Schell picked up and transported them to Kansas.

The birth of a profession

On June 9th, 2017, Charity Beyond Borders hosted an event titled Celebrating a New and Emerging Profession in Ghana: Respiratory Therapy, which officially kicked off the profession in Ghana. This event was attended by several members of the Ghanaian Ministry of Health, high-ranking university administrators from the University of Ghana, Kwame Nkrumah University of Science and Technology (KNUST), and members from a prominent regional bank, Ecobank. The event not only built awareness for the profession but also outlined challenges moving forward. Ecobank, through one of its philanthropy arms, the Ecobank Foundation, pledged $25,000 over the next five years to support the respiratory therapy initiative in Ghana. It was a very special moment for me to be a part of, as I had seen the respiratory therapy program in its infancy stages when I had first visited in 2013.

Takeaways

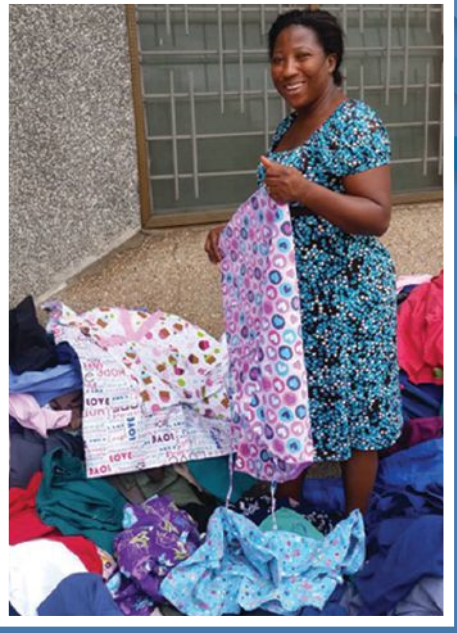
When I set out, I saw this trip as an opportunity to broaden my understanding of complex systems and unique challenges associated with delivering essential health care in developing nations. In particular, I wanted to understand the organizational side of health care with the goal of expanding my sphere of influence and the number of people I could help.

However, I left with a new perspective on the difference RTs like me can make. I realized that I already possessed the capacity to help many other people. Sometimes when working as an RT here in the United States, I feel that RTs are overlooked, underappreciated, and underutilized. Seeing the deficiency of knowledge about the respiratory system by the physicians and medical students in Ghana, I know with proper encouragement and mentoring, RTs in Ghana have the opportunity to become integral members of the health care team and make a huge lasting impact.

After traveling through Ghana, I can wholeheartedly say that I have a new appreciation for just about everything in my life. I try to explain to people that it was a "reality check" and really helped put a lot of things into perspective. There are so many things that we take for granted. My experiences in Ghana have helped me to become more culturally sensitive and to develop a broader global perspective. Through all of my experiences, I have learned a lot about others, but I've learned even more about myself.

I'm glad I took a couple of risks and allowed myself to be open to new experiences. Had I not first heeded the advice of my professor, I likely would not have ever met Dr. Trujillo or attended this life-changing trip. It just goes to show you that you never know how one small, seemingly inconsequential decision can lead to an unexpected opportunity for something wonderful. You are always one decision away from a completely different life.

I am thrilled we were able to help my friend Richard. With a little thinking outside the box, anything is possible. It can seem overwhelming trying to find a place to start making a difference, but "no act of kindness, no matter how small, is ever wasted." Some people may be discouraged by the looming challenges ahead. However, a journey of a thousand miles begins with a single step. Being able to see changes at the different medical centers, in the infrastructure projects, and the progression of the RT program in Ghana since my first trip, I am hopeful for the future. I found my experiences extremely empowering, and I am more motivated than ever. You can always search for a reason not to do something, but every day is a new opportunity to start making a positive change in the world. ■



The scrubs are already making a difference in Ghana.

International Respiratory Care Update

by John D. Hiser, MEd, RRT, FAARC

I sometimes hear from my respiratory friends and colleagues this common question: What is going on around the world? It is hard to answer them because there is so much going on that I don't know where to begin. Writing this short article prompted me to survey some of our international friends and members of our international committee to get an update to share with you. Here is what's going on around the world in respiratory care.

The AARC, in collaboration with the American Respiratory Care Foundation and the International Committee for Respiratory Care (ICRC), continues to advance our international mission and goals. Today more than 50 countries have respiratory care practitioners. With the addition of our three new AARC/ARCF International Fellows this year, we have now hosted 172 health care professionals from 67 countries as part of our International Fellowship Program. This year we will also host our first VIP Fellow, who will visit this country from Africa.

Legal recognition of the profession exists in six countries, with voluntary credentialing having been established for respiratory care professionals in 12 countries. Eleven countries outside the United States have more than 80 education programs. The most recent addition to the number of programs comes from Ghana, which established the first BS education program on the African continent in the fall of 2017.

There are 15 professional associations for respiratory therapists around the world. With the addition of the Philippines last December, we now have five AARC International Affiliates. We continue to promote meaningful interaction and professional understanding exemplified by our annual meetings of the ICRC and with the efforts made by our ICRC governors who represent more than 27 countries.

The ICRC continues to collaborate and approve numerous International Education Recognition System (IERS) programs each year. Speaker-exchange programs foster professional collaboration through seminars conducted throughout the world.

In addition, numerous AARC members and international colleagues have volunteered for medical mission trips, bringing improved health care to less fortunate people in underserved countries.

More than half of the articles accepted for publication by Respiratory Care, the AARC's science journal, have been submitted from outside the United States. Many of those were written by past International Fellows.

Finally, yet importantly, the AARC continues to share its publications and translated materials with our international friends as part of our ongoing mission to nourish and improve the practice of respiratory care around the world. ■

About the Author

John D. Hiser, MEd, RRT, FAARC chairs the AARC International Committee and is professor emeritus at Tarrant County College in Fort Worth, TX. He served as AARC president in 2005.

Yemeni RTs Celebrate First Respiratory Care Week

A cake to mark the occasion.

Yemeni supporters of the respiratory care profession gathered for the RC Week event.

This banner welcomed everyone to the first RC Week celebrations.

The respiratory care profession was introduced to the Republic of Yemen back in 2006 when four nurses from the nation's largest hospital were sent to Jordan to study respiratory care for a year. When they returned to their country, they began offering short courses in respiratory topics to ICU nurses, and the concept of having clinicians who were specially trained in respiratory care slowly but surely grew from there.

In 2016, the Bilquis Medical Institute started the first accredited program in respiratory care, and this past October, Yemeni RTs celebrated their first ever National Respiratory Care Week. According to AARC member Saleem Hamilah, BSc, RCP, the recognition was designed to "raise awareness of the respiratory care profession and the need for improved lung health."

Sponsored by Bilquis Medical Institute, the celebrations included a presentation on the progress made by the RT program along with lectures on idiopathic pulmonary fibrosis and weaning from mechanical ventilation. The first "RC Star in Yemen" award went to Hamilah for his pioneering efforts on behalf of the profession in his country. Going forward, it will be presented annually during RC Week to a Yemeni RT who shows dedication, service, passion, and creativity to the respiratory care specialty in Yemen.

A graduate of the Bilquis Medical Institute RT program, Hamilah serves as head of the respiratory care department at Modern European Hospital and is also a respiratory care specialist at 48 Model Hospital. In 2017, he became the first Yemeni to join the AARC in more than a decade, and he played an integral role in organizing the 2018 Yemeni RC Week events. He also helped organize the first respiratory care conference held in the country in 2017.

Hamilah says there are currently about 200 RTs employed at around 13 hospitals in Yemen and he and his colleagues are working to grow the profession to cover more of the nation's health care facilities. "One of our future goals is to initiate the bachelor of science in respiratory care and establish the Yemeni Association for Respiratory Care," he says. ■

With a Little Help from Our Friends

University of Kansas Dean Backs RT Efforts in Ghana

by Debbie Bunch

Dr. Abiodun Akinwuntan is a big supporter of the Ghanaian RT program.

Dr. Abiodun Akinwuntan has provided invaluable support for AARC members seeking to train respiratory therapists in this African nation.

Getting the respiratory care profession off the ground in a foreign country takes immeasurable effort on the part of local clinicians, educators, government officials, and American respiratory therapists who travel to their shores to share their expertise. That's the kind of synergy that took place in Ghana when AARC members Lisa Trujillo, DHSc, RRT, Karen Schell, DHSc, RRT, RRT-NPS, RPFT, and their colleagues teamed up with the Univer-

Dr. Akinwuntan is working closely with AARC members Lisa Trujillo, left, and Karen Schell to improve respiratory care in Ghana and other African nations.

sity of Ghana to launch the very first school of respiratory care in the country.

But a little serendipity doesn't hurt either. For the folks involved in the Ghanaian program, it came when Karen Schell went to work as a clinical assistant professor in the department of respiratory care and diagnostic science at the University of Kansas Medical Center (KUMC) in Kansas City, and met the dean of the School of Health Professions. As it turned out, Abiodun Akinwuntan, PhD, MPH, MBA, began his health care career as a physical therapy student at the University of Lagos in Nigeria before taking his education abroad, first to Belgium, where he earned doctoral and master's degrees in neuromotor rehabilitation from the Catholic University of Leuven, and then to the United States, where he earned master's degrees in public health and business administration from Georgia Regents University in Augusta, GA.

The more he learned about what Drs. Schell and Trujillo (who is now respiratory care program director at KUMC) were doing for the African nation, the more intrigued he became.

Going beyond praise

"I first learned of the efforts of these two awesome and phenomenal ladies in September 2016," recalls Dr. Akinwuntan. "Dr. Karen Schell met with me to inform me of the Ghana initiative, the more than 30 visits to Ghana that she and Dr. Trujillo have made over the years, and the first educational program in respiratory care that they helped to start in the University of Ghana. I was quite impressed by their commitment, determination, and dedication to ensuring that Ghanaians benefitted from the services of well-trained respiratory therapists."

Noting that the statistics on respiratory conditions in Ghana are dire — according to the Centers for Disease Control and Prevention, respiratory diseases and illnesses are the leading cause of mortality, even outpacing malaria — Dr. Akinwuntan decided to do more than just praise their efforts. He provided funds to defray some of the travel costs incurred by the RT students traveling with Drs. Schell and Trujillo to assist with the Ghana program and humanitarian efforts, and he also visited the team himself while they were in Ghana during the summer of 2017.

"As a person who is particularly invested in global health, I have continued to give Karen and Lisa moral support for the fantastic work they are doing in Ghana," says Dr. Akinwuntan. "I also established the connection between Karen and Lisa and Ecobank Ghana that eventually resulted in Ecobank Foundation providing significant funding support for the academic program started in the University of Ghana."

Most recently, Dr. Akinwuntan facilitated a "memorandum of understanding" between KUMC and the University of Ghana that will help support the RT program in Ghana, and he was instrumental in bringing a group of nine pioneering respiratory care students and faculty from the University of Ghana to KUMC last November, where they spent the entire month working with colleagues in the KUMC respiratory care program.

Dr. Akinwuntan is making sure students in the KUMC program can continue to participate in international respiratory care as well by adding a new course to the curriculum. "I have just approved a new community

and global health course that was proposed as part of the respiratory care curriculum," he says. "This is now a required course for all respiratory care students and will facilitate their ability to participate in international educational experiences abroad." Those international experiences abroad will now count toward a portion of the students' senior clinical requirements.

His heroes

Dr. Akinwuntan believes the Ghanaian program can serve as a model for other respiratory care programs throughout Africa, and he has already begun advocating for the establishment of additional programs. "As a matter of fact, all countries in Africa and the rest of the world without an established respiratory care program will significantly benefit from a similar model," says Dr. Akinwuntan. "The training and availability of indigenous respiratory care therapists are critical to adequately treating respiratory diseases and illnesses, which are universal problems."

In the meantime, he says the KUMC School of Health Professions will continue to provide financial and logistical assistance to respiratory care students and faculty who wish to visit Ghana for the purpose of promoting the profession of respiratory care. He says this is a great initiative that will continue to facilitate the provision of health care to those who really need it and will appreciate it.

All of these efforts combined will go a long way toward solidifying the value of respiratory therapists in Africa, and they bode well for the future of the profession across the rest of the developing world. Says Dr. Akinwuntan, "There is the need to start respiratory care training programs in other universities in Ghana and train more indigenous respiratory care therapists to continue the good works of Drs. Karen Schell and Lisa Trujillo, my heroes." ■

Industry Watch

Boehringer Ingelheim's new labeling for Stiolto Respimat

According to Boehringer Ingelheim, the FDA has approved new labeling for Stiolto Respimat Inhalation Spray (tiotropium bromide and olodaterol) that includes data showing a meaningful reduction in COPD exacerbations driven by tiotropium. The FDA also revised the indication for Stiolto Respimat. It is now approved for the treatment of patients with COPD, including chronic bronchitis and emphysema. Previously, the Stiolto Respimat indication was for the treatment of air-flow limitation in patients with COPD, including chronic bronchitis and emphysema. The revised language broadens the indication and illustrates that Stiolto Respimat does more than simply improve air flow.

Genentech and ASPR to develop new medicines

The Office of the Assistant Secretary for Preparedness and Response (ASPR) at the Department of Health and Human Services has announced a strategic partnership with Genentech aimed at developing innovative medicines that combat diverse national health security threats. The company and ASPR's Biomedical Advanced Research and Development Authority will jointly manage and share the cost to develop a portfolio of medicines that meet national health security requirements and have commercial uses. The partners will focus first on developing a first-in-class therapeutic for hospitalized influenza patients and a treatment for lung injuries caused by inhaling sulfur mustard gas.

Grant will fund study on tobacco related retail policies

The National Institutes of Health (NIH) have awarded researchers from Washington University in St. Louis, the University of North Carolina at Chapel Hill, and Stanford University a five-year, $11.6 million grant called Advancing Science & Practice in the Retail Environment (ASPiRE). The goal of the project is to build a strong base of scientific evidence for effective policies in retail settings to help reduce tobacco use, tobacco-related disparities, and the public health burden of tobacco, including cancer. The investigators will study how tobacco-retailer density contributes to cigarette smoking and tobacco-related illnesses, evaluate the impact of local retail interventions on tobacco use and availability, and develop computational models to learn how changes in the and consumer environment could lead to improved public health.

Tackling innovative medical devices for children

To foster the development, production, and marketing of the next generation of medical devices designed to meet growing children's unique needs, the FDA has awarded $5 million to the National Capital Consortium for Pediatric Device Innovation led by Children's National Health System and the University of Maryland, College Park. "While exciting advances are being made in medical technologies for adults, crucial pediatric innovations often languish in areas like asthma, heart disease, and neonatal health," stated Paul Grand, CEO of MedTech Innovator, a consortium member along with BioHealth Innovation, Inc. "We are excited to bring the resources of our global accelerator to identify and advance best-in-class pediatric technologies, to ensure they reach the market and improve the health of the millions of children who need them most." Affiliated members include industry leaders such as Smithwise, Epidarex, and Cadence.

PARI Pharma GmBH, Insmed announce FDA approval

The FDA has issued accelerated approval under a New Drug Application for PARI Pharma GmbH's optimized eFlow technology nebulizer LAMIRA™ together with Insmed's ARIKAYCE® (amikacin liposome inhalation suspension). ARIKAYCE is the first and only FDA-approved therapy indicated for the treatment of *Mycobacterium avium* complex lung disease as part of a combination antibacterial drug regimen for adult patients with limited or no alternative treatment options.

Jazz Pharmaceuticals releases survey results

Jazz Pharmaceuticals plc has announced findings from a U.S. survey of more than 300 patients living with sleep apnea and their partners. Conducted by The Harris Poll and sponsored by Jazz Pharmaceuticals, the survey found that 36% of patients said their excessive daytime sleepiness has caused

them to miss out on activities or events, avoid social situations, or give up activities. Seventeen percent said it has led to problems at work, and 14% said they have fallen asleep at the wheel of a motorized vehicle, either stopped at a light/sign or while driving, in the previous 12 months. Forty-five percent of those in the partner group felt their significant other's excessive daytime sleepiness negatively impacted their relationships, and 32% reported having avoided social situations or missed activities/events because of their partner's excessive daytime sleepiness.

PROMOTE Center advances science to support patients

A new Promoting Resilience in Persons with Multiple Chronic Conditions (PROMOTE) Center at the Johns Hopkins School of Nursing will seek to advance science in supporting patients with multiple chronic conditions and provide an opportunity for researchers to drive culture change and develop sustainable health care initiatives through innovative research design. Funded through an NIH P30 grant, the center will aim to shift the current paradigm of disease-specific models of care to person-centered, community-focused methods that address various factors affecting health, including functional limitations, family caregivers' perspectives, poverty, housing, access to food, and traumatic life events.

Propeller Health study advocates for digital medicines

New research from Propeller Health suggests that clinical guidelines for assessing asthma control may need to be updated to reflect objective patient information obtained from digital medicines. Conducted in partnership with the University of Colorado School of Medicine and Children's Hospital Colorado and published in *The Journal of Allergy and Clinical Immunology: In Practice*, the analysis shows that both patients and providers gain a more accurate view of a patient's medication use when digital sensors record the number of "puffs" of rescue medication that were used. Propeller's digital-medicine platform helps patients manage diseases like asthma and COPD by delivering concrete insights on symptoms, triggers, and medication use.

FDA, NIH grant supports research on tobacco control

The FDA and NIH are funding a new $18 million grant that will support research at the Perelman School of Medicine at the University of Pennsylvania and at the Rutgers University School of Public Health designed to provide data to protect public health and inform regulatory science issues related to tobacco control. Researchers will combine their expertise to assess smoking behaviors and toxin and nicotine exposure. They will also look at eye tracking and product risk-perception measures to better understand the impact of potentially misleading advertising claims, descriptors, labeling, and packaging features of combustible tobacco products.

New formulation of Xolair for allergic asthma

Genetech's Xolair (omalizumab) has been approved by the FDA in 75-mg/0.5 mL and 150-mg/mL single-dose prefilled syringe (PFS) formulations. The drug is the only biologic approved for both allergic asthma and chronic idiopathic urticaria. It was previously available in a 150-mg single-dose vial with lyophilized, sterile powder for reconstitution. The new formulation, which is known as Xolair PFS, made its debut in the U.S. market at the end of 2018. It eliminates the need for clinicians to use sterile water for injection and reconstitutes the drug before administration.

Studying electronic tobacco products

A $19.5 million grant from the federal Tobacco Centers of Regulatory Science will unite teams from Roswell Park Comprehensive Cancer Center and the University of Rochester Medical Center in a study that will analyze various combustible and electronic tobacco products, their consequences for health, and how users interact with these products. "We're going to use a lot of different approaches to answer some very important questions: How does the concentration of flavorings affect use? Are there benefits to switching from one type of product to another? Does changing packaging or putting warnings on products change behavior? These are things people want and need to know," said Maciej Goniewicz, PhD, PharmD, an internationally recognized expert in tobacco use.

InDevR reports good results for influenza assay

InDevR's recent publication in *npj Vaccines* describes the development and performance of the VaxArray Influenza Pandemic HA potency assay for vaccines containing H5, H7, and H9 subtypes. The assay demonstrated high sensitivity, accuracy, precision, and detection of a large panel of influenza viruses with pandemic potential spanning 16 years of antigenic drift and was also shown to be compatible with low-dose and adjuvanted vaccines as well as upstream crude in-process samples, which would allow manufacturers to use the test to optimize yield. The VaxArray system outperformed the current labor-intensive assay for influenza vaccine potency in terms of sample-to-result time (two hours vs. two days), limit of detection, sensitivity, and compatibility with crude and adjuvanted samples. ■

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

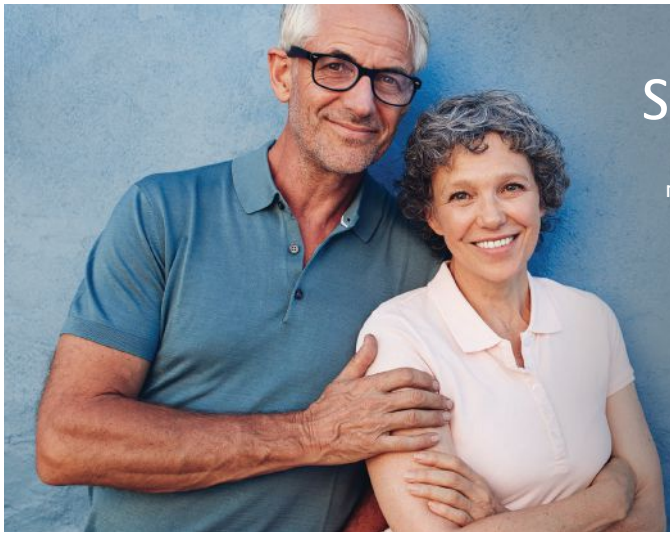
Special Advertising Section

Industry Update

Featuring information on products and equipment from manufacturers

RC Currents

IN THE NEWS



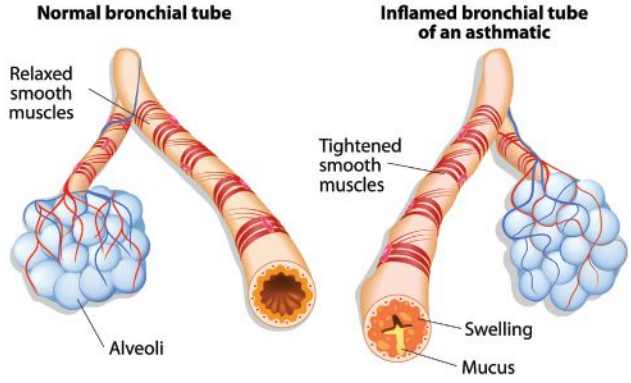
Share Your Wisdom

Our "Reflections" column celebrates AARC members who have recently retired from the profession. We'd like you to look back at your career or some aspect of it and tell us what it meant to you and why. Funny, sad, inspiring — the door is wide open! So go look at a few Reflections columns we've published in the back of the issue, start brainstorming some ideas, and then submit your story to *AARC Times* Editor Marsha Cathcart at cathcart@aarc.org. ■

How Obesity Fosters Airway Hyperresponsiveness

Scientists have speculated that the link between asthma and obesity lies in the systemic localized inflammation of the airways that occurs in people with a high body mass index. New research out of Rutgers University adds to the evidence, suggesting that hyperresponsiveness of the airways may also be coming into play.

In a study that combined human airway smooth muscle cells with histamine and carbachol, a drug that stimulates the part of the nervous system that controls the airways, the investigators found that the cells released calcium, which mimics muscle contraction. Muscle cells from obese donors released more calcium and had greater shortening during muscle contraction than cells from normal-weight donors. In addition, cells from female obese donors released more calcium than cells from male obese donors.



According to lead author Reynold Panettieri Jr., MD, these results suggest that obesity imprints a unique signature on airway smooth muscle cells that can be identified, and this may lead to novel targeted approaches to improve asthma management without the use of steroids. The study appeared in a recent edition of the American Journal of Physiology-Lung Cellular and Molecular Physiology. ■

ALS Affects the Mind, Too

Researchers have long believed that while amyotrophic lateral sclerosis (ALS) devastates the body, it leaves the mind intact. A new study that compared cognitive test results among 161 people with ALS and 80 people without the disease finds that might not be the case.

The people with ALS had worse scores than the control group on all of the thinking tests except visual-spatial ability, with the most common problems occurring on the test of verbal fluency. Problems were most common in those in more advanced stages of the disease. Among those in stage 4, 65% were affected. The study was published by *Neurology* earlier this year. ■

Inhaled Steroids Linked to Lung Infections

Stanford University researchers who analyzed the medical records of 549 patients diagnosed with nontuberculous mycobacteria (NTM) lung infections in northern California over a 10-year period have linked the infections to use of inhaled steroids. Overall, people who filled three or more prescriptions for these drugs were 2.7 times more likely to develop an NTM lung infection. The longer people took the prescriptions, and the higher the dose they were on, the more likely they were to end up with one of the infections.

While noting that inhaled steroids offer significant benefits to people with asthma, the authors believe these findings suggest they should be used with caution in people with chronic obstructive pulmonary disease (COPD) because they have been found to have only a small benefit in those patients. "Inhaled steroids are standard therapy for those with asthma because the benefits have proven in studies and clinical practice to outweigh the risks," said study author Stephen J. Ruoss, MD. "But as physicians, we should be careful using this class of drugs broadly in patients with COPD."

The study appeared in a recent edition of the *Annals of the American Thoracic Society*. ■

DNA Flu Vaccine Shows Promise

Wistar Institute scientists have engineered a synthetic DNA vaccine shown to produce broad immune responses against a type of influenza A for which the standard flu vaccine is less effective. These viruses, known as H3N2 influenza, have been responsible for high rates of morbidity and mortality in recent flu seasons.

After receiving the new DNA vaccine, mice were able to withstand intranasal virus challenge with 10 times the median lethal dose of H3N2. Mice in the placebo group succumbed to the infection within six days of exposure. The study was published in a recent edition of *Human Gene Therapy*. ■

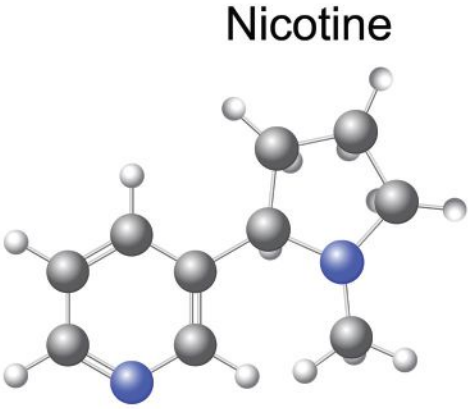
Newer E-cigarettes Pack a Nicotine Punch!

According to researchers from Roswell Park Comprehensive Cancer Center and Stony Brook Children's Hospital, kids who use the newer "pod" e-cigarette devices are getting about as much nicotine as they would from a traditional cigarette. What's more, these devices deliver nicotine in a salt form, which makes it more easily absorbed by the lungs.

During clinic visits, the investigators surveyed more than 500 young people ages 12–21 about their use of e-cigarettes, and more than half also provided urine samples. Biomarker analysis confirmed the lack of exposure to traditional tobacco smoke among the participants.

Specific findings included:

- Nicotine concentrations in Juul and similar products ranged from 21.8 mg/mL to 56.2 mg/mL — significantly higher than what is seen with other e-cigarette technologies.
- In aerosol generated from those products, nicotine yields approached the levels found in smoke from traditional combustible cigarettes.
- Concentrations of cotinine, a byproduct of nicotine metabolism, were even higher than what has been reported among adolescent cigarette smokers, perhaps stemming from the fact that the products analyzed all incorporate a salt form of nicotine.



"While we acknowledge that this was a small study and further research is needed, it's critically important that users, parents, clinicians, public-health advocates, and regulatory bodies be informed about how Juul and similar devices work and how they impact the body, as our results show that the risk for long-term product use and nicotine addiction is dangerously high," explained study author Rachel Boykan, MD. The study appeared in a recent issue of *Tobacco Control*. ■

E-cigarettes May Have Some Value for COPD Patients

The role of e-cigarettes in helping people quit smoking or lessening the effects of continuing to smoke traditional cigarettes is still being hotly debated in medical circles. A study in the *International Journal of Chronic Obstructive Pulmonary Disease* adds more fuel to the fire.

Italian researchers compared 22 patients with COPD who either quit smoking traditional cigarettes or significantly cut back on them by switching to e-cigarettes to 22 similar patients who continued to smoke traditional cigarettes. The patients were all followed for three years. Outcomes showed nearly 60% of those who switched to the e-cigs had completely quit smoking traditional cigarettes by year three. COPD exacerbations dropped from a mean of 2.3 per year at baseline to 1.3 per year by the end of the study for patients in the e-cig group. Patient scores on the COPD Assessment Test improved for e-cig users as well, and so did exercise capacity as measured by the six-minute walk test. Similar changes were not seen for patients in the control group. ■

Crowd sourced data on sites like Yelp and Facebook often drive business for restaurants and other establishments. But people should probably look elsewhere for advice on which hospital to choose.

That's the key finding from Indiana University researchers who compared social media ratings of hospitals with ratings available from the federal government's Hospital Compare website. Results showed that while the social media sites did often agree with the government site about issues related to patient experience (food, friendliness, amenities, and the like), they ran far afield of ratings by Hospital Compare when it came to the things that matter most, such as quality of care and patient safety. In fact, in some cases, the 20% of hospitals ranked "best" on social media in a given area were ranked "worst" by the government site.

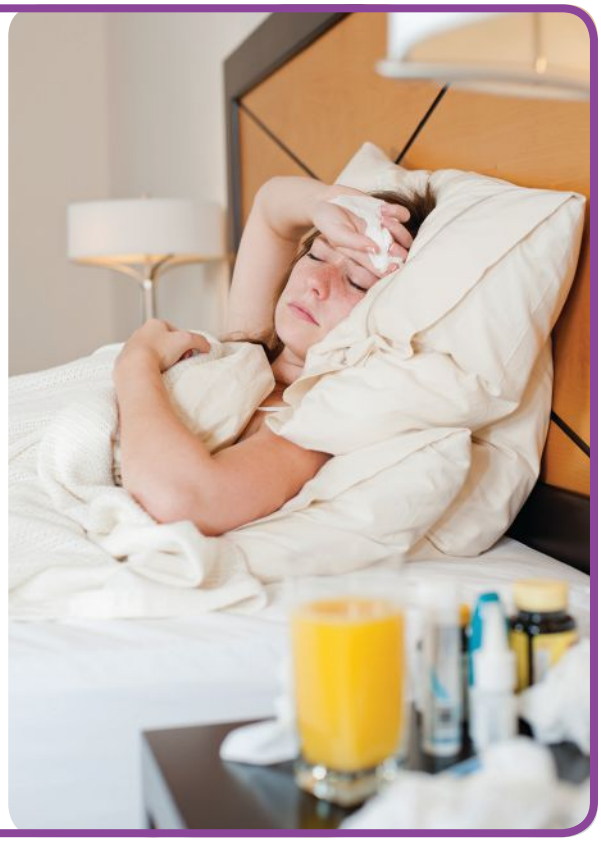
The investigators published their findings in a recent edition of *Health Services Research*. ■

New Drug May Shorten Flu Symptoms

An anti-viral drug currently in the works may spell relief for people suffering from the flu. According to researchers publishing in the *New England Journal of Medicine*, baloxavir marboxil shortened the duration of flu symptoms by about one day and more quickly cleared the virus when compared with placebo in otherwise healthy teens and adults.

A phase 3 trial found that the drug was similar in treating symptoms to that of a five-day course of oseltamivir, but with significantly greater antiviral potency. Because baloxavir has a novel antiviral action in inhibiting the endonuclease of the virus, it is inhibitory for both influenza A and B viruses, including those that may be resistant to currently available drugs. No significant side effects were seen for the medication.

The drug is currently under priority review by the Food and Drug Administration. ■

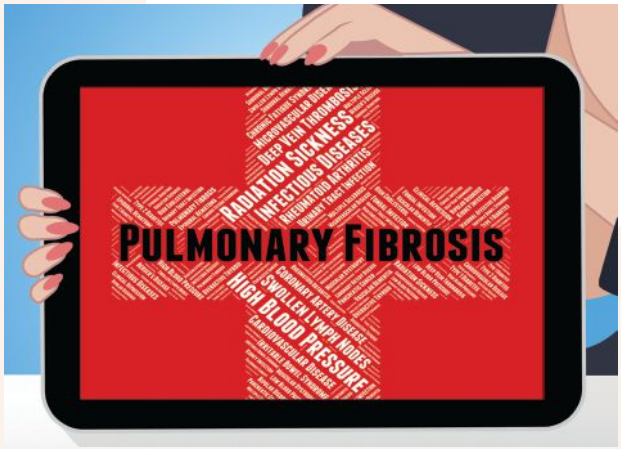


New Idiopathic Pulmonary Fibrosis Guideline Released

The American Thoracic Society, the European Respiratory Society, the Japanese Respiratory Society, and the Latin American Thoracic Society have released a new guideline to help diagnose idiopathic pulmonary fibrosis (IPF). The guideline updates a 2011 guideline, with the main refinement lying in the use of four diagnostic categories based on high-resolution computed tomography (HRCT) of the lung: usual interstitial pneumonia (UIP) pattern, probable UIP pattern, indeterminate pattern, and alternative diagnosis.

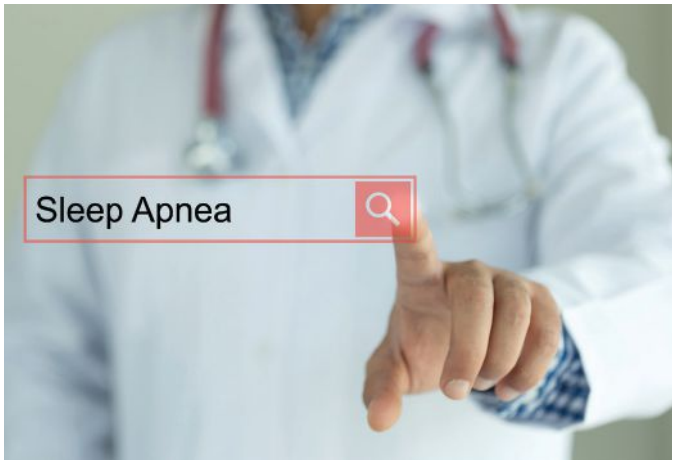
Other recommendations include:

- For all patients, a detailed history should be taken of both medication use and environmental exposures, and serological testing should be performed to exclude connective tissue disease as a potential cause of the interstitial lung disease (ILD).
- For patients with an HRCT pattern of probable UIP, indeterminate, or an alternative diagnosis, conditional recommendations were made for performing bronchoalveolar lavage (BAL) and surgical lung biopsy (SLB); due to lack of evidence, no recommendation was made for or against performing transbronchial lung biopsy (TBBx) or lung cryobiopsy.
- A conditional recommendation was made for multidisciplinary discussions to aid in diagnosing IPF, particularly when the HRCT pattern has features of probable UIP pattern, indeterminate, or alternative diagnosis.



- For patients with newly detected ILD who have an HRCT pattern of UIP, strong recommendations were made against performing SLB, TBBx, and lung cryobiopsy; a conditional recommendation was made against performing BAL.
- A strong recommendation was made against measurement of serum biomarkers for the sole purpose of distinguishing IPF from other ILDs.

The new guideline was published recently in the *American Journal of Respiratory and Critical Care Medicine*. ■



New Weight Loss Guideline Developed to Help OSA Patients

A 20-member panel that included sleep, pulmonary, weight management, and behavioral experts, along with three patients, has released new guidelines on weight loss for people with obstructive sleep apnea (OSA).

The recommendations are broken down into categories based on a person's body mass index (BMI) and range from participating in a comprehensive lifestyle intervention program consisting of diet, exercise, and behavioral counseling for those with a BMI ≥ 25 kg/m2 to referral for bariatric surgery evaluation for those with a BMI ≥ 35 kg/m2. The guidelines appeared in a recent edition of the *American Journal of Respiratory and Critical Care Medicine*. ■

Immune-Resistant Tuberculosis?

People who develop drug-resistant tuberculosis (TB) may be fighting another problem as well. Researchers from Washington University School of Medicine in St. Louis have found that the same mutation that makes TB bacteria withstand a first-line drug also elicits a different — and probably weaker — immune response in mice.

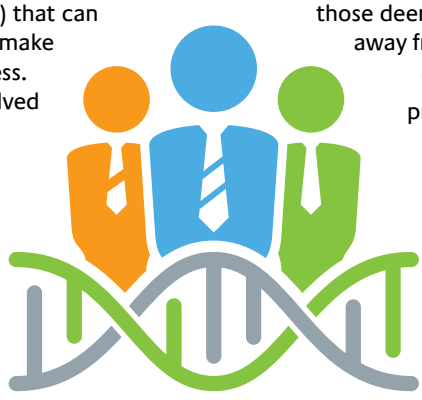
The authors note that studies are currently underway to find out whether immune-enhancing drugs combined with antibiotics can improve outcomes for people with TB, but because of the inherent dangers of working with drug-resistant bacteria, nearly all research into strengthening the immune response has been conducted using drug-sensitive strains. Scientists need to know which immune pathways to target when developing host-directed therapeutics, and those pathways could be different for drug-sensitive and drug-resistant TB.

"We don't know enough about the differences between resistant and sensitive TB to be confident that the therapeutics and vaccines we're designing are going to work," noted senior author Shabaana A. Khader, PhD. "We're going to have to do those studies." The study was published in a recent edition of *Nature Microbiology*. ■

Study Links Genetic Profile to Worse Pollution-Related Asthma Symptoms

People with asthma who have a specific genetic profile suffer more symptoms after exposure to traffic pollution, find researchers from the National Institute of Environmental Health Sciences who worked on the study with investigators from Rice University. People without the profile, however, did not suffer worsening symptoms due to traffic pollution.

The study was based on a genetic variation called a single-nucleotide polymorphism (SNP) that can alter the way proteins are made and make individuals more or less prone to illness. Researchers identified four SNPs involved in a biochemical pathway that leads to inflammatory responses in the body, then looked for the presence or absence of those SNPs in people with asthma. Proximity to major roads and asthma symptoms were collected and assessed based on the SNPs. Participants were divided into three groups: hyper-responders to air pollution, who were likely to develop inflammation; hypo-responders to air pollution, who were less likely to develop inflammation; and those in between.



The researchers found that asthma sufferers who were hyper-responders and lived closer to heavily travelled roads had the worst asthma symptoms, while those deemed hypo-responders and lived further away from busy roads had milder symptoms.

"Based on this research, we could propose that hyper-responders, who are exposed to traffic pollution, receive air purification intervention, such as HEPA filters, for their home," study author Stavros Garantziotis, MD, was quoted as saying. The study was published in a recent edition of *Scientific Reports*. ■

Researchers' Lung Tissue on a Chip Mimics Lung Fibrosis

Researchers from the State University of New York at Buffalo and the University of Toronto in Canada have developed an in vitro lung-tissue-on-a-chip system that mimics lung fibrosis, offering rapid testing of potential new anti-fibrotic treatments.

The system consists of arrays of miniscule squares, with micropillars about the thickness of a human hair placed around the edges of each individual square. Lung alveolar tissue is grown so that the tissue is stretched like a trampoline over the micropillars.

In this experiment, the microtissues were treated with tissue growth factor-beta, which caused the tissue to contract and stiffen, mimicking the stiffening of lung alveolar tissue in people who suffer from lung fibrosis. The process also bent the micropillars, which could be observed under a microscope. Relaxation of the fibrotic bending of the micropillars following treatment with pirfenidone and nintedanib confirmed that the system is a reliable model of lung fibrosis that responds to drug treatment.

"We expect our system to speed the translation of anti-fibrotic therapies from laboratories to the clinic," senior author Ruogang Zhao, PhD, was quoted as saying. The study appeared in a recent edition of N*ature Communications*. ■

Unconventional T Cells Protect Infant Lungs

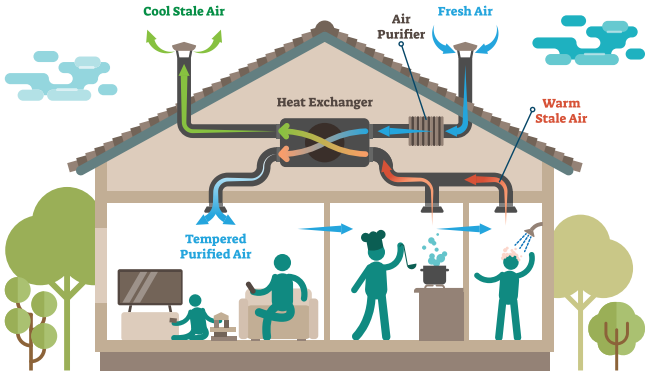
A study led by investigators from St. Jude Children's Research Hospitals has shown that unconventional T cells play a pivotal role in protecting infants from serious flu complications, not by fueling inflammation, but by triggering a biochemical cascade that increases levels of a growth hormone essential for repair of lung cells damaged by the infection. "This study suggests the immune response to flu infections varies between infants and older patients and uses a distinct route for repair and restoration of lung function," said corresponding author Paul Thomas, PhD. "The work also identifies a pathway to target in the future using therapies to ease flu complications in infants."

The study appeared in a recent edition of *Immunity*. ■

Study Evaluates Indoor Air Quality Monitors

Indoor air researchers at the Department of Energy's Lawrence Berkeley National Laboratory who tested seven consumer-grade air-quality monitors found that four devices — AirBeam, AirVisual, Foobot, and Purple Air II — could reliably detect high levels of fine particles with a diameter of 2.5 micrometers or smaller. When high levels are detected, use of a ventilation system or an air cleaner to reduce pollutant exposure could be triggered.

Although all of the monitors failed to detect ultrafine particles with diameters smaller than 0.3 micrometers, the researchers believe that, because most sources of indoor air pollution contain both larger and smaller particles, the monitors could still help reduce exposure to ultrafine particles by generally detecting when air quality worsens and triggering better ventilation during those times. The study was published in *Indoor Air*. ■



Researchers Develop ARDS Prediction Model for Burn Patients

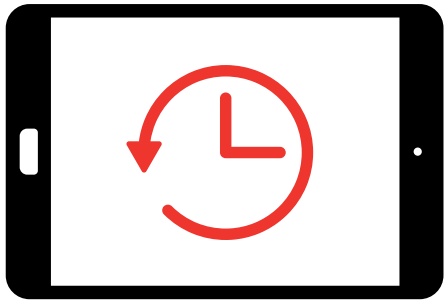
Loyola University researchers have developed a prediction model that can help determine which burn patients will end up with acute respiratory distress syndrome (ARDS).

The model includes three factors: the extent of the patient's inhalation injury, the percentage of the patient's body that was burned, and whether the patient had high levels of a blood-clotting protein called the von Willebrand factor.

The multicenter study included 113 adult patients who had burns over at least 10% of their bodies or were suspected of having inhalation injury. ARDS developed in 33.6% of the patients a median of 2.2 days after their injuries. In developing their prediction model, the investigators examined clinical characteristics, including burn and inhalation injury, alcohol misuse, and current tobacco use; other health problems such as diabetes, congestive heart failure, heart disease, and COPD; and five protein biomarkers found in plasma. The model consisting of inhalation injury, the von Willebrand factor biomarker, and the percent of body burned did the best job of predicting which patients were most likely to develop ARDS.

The authors believe that, once the model is validated by other studies, it could guide clinical trials designed to identify burn patients who are at risk for ARDS and prevent the condition from developing. The findings were published in a recent edition of the *Annals of Surgery*. ■

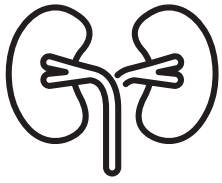
AARC Times Rewind



To celebrate *AARC Times*' transition from a print magazine to an all-digital magazine beginning early next year, we plan to feature a new column throughout 2019 called "*AARC Times* Rewind." This new column will highlight some of our magazine's most interesting, enlightening, fun, and informative articles from the past 40+ years.

So please keep reading our print edition this year, check out our *AARC Times* Rewind column beginning in this issue, and get ready to transition to our online-only version of *AARC Times* in January 2020. ■

Strange but True…



Move over, cardiopulmonary system: Everyone knows air pollution can damage the lungs and the heart. But the kidneys? Yes, report Michigan Medicine researchers, because the volume of blood flow in the kidneys is so large, anything that hurts the circulatory system hurts the kidneys, too.

Brown bear, brown bear: The microbiota of wild animals may help protect them from aggressive microbes in their environment. Researchers are tapping into that protection by using bacteria taken from the saliva of an East Siberian brown bear to find potentially lifesaving antibiotics. By placing a bacterium from the bear in an oil droplet, they can quickly see if it produces antibodies against harmful bacteria like *Staphylococcus aureus*. But no worries: the bear was released back into the wild after his saliva was sampled.

Deep state: A new wearable ultrasound patch that noninvasively monitors blood pressure in arteries deep beneath the skin could help people detect cardiovascular problems earlier and with greater precision. In tests, the patch performed as well as some clinical methods to measure blood pressure, and because it uses ultrasound, it could potentially be used to noninvasively track other vital signs and physiological signals from places deep inside the body as well. ■

Contribute to the "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 obituary so that we can share it with the membership and pay tribute. ■

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Mentors Made a Big Difference in My Career

by Tom F. Colley, BS, RRT

On 1 January 2018 at 0730, I clocked out for the final time, bringing to a close my 48-year career in respiratory care. I literally blundered into the profession in 1969 as an inhalation therapy technician trainee at the community hospital in my hometown. I was a college student studying business administration and being "groomed" for a very different career. It all came about through a chance introduction by a classmate majoring in pre-med.

Four mentors

I was fortunate to have four mentors in my career. The first was F. Carroll Reese, ARIT, chief inhalation therapist at my hometown hospital in upper East Tennessee. Carroll provided a good basic foundation in respiratory therapy for me as an on-the-job trainee and encouraged me to seek formal training, which I did at the Erlanger Hospital School of Inhalation Therapy in Chattanooga, TN. There I met my next two mentors, Dr. David Chadwick, chairman of anesthesia and medical director of the RT department and RT school, and James S. Allen, MBA, RRT, past president of the AARC.

Dr. Chadwick was a British gentleman with a great sense of humor, but he could be a tough taskmaster, insisting that his RT students be able to "stand and deliver." This not only prepared me for the NBRC exams, but also provided a great foundation that lasted my entire career.

After 24 months, I graduated and successfully completed my boards under the old NBRC system, which required candidates to pass a written exam before applying for the oral exam. This process was problematic, as it was often drawn out and difficult to pass both parts in the same year due to the 4- to 6-week wait for results of each exam. Both exams were given twice a year, and only a limited number of candidates could stand for the oral examination. The orals were certainly not without merit, as that method forced you to know the fundamentals well and think on your feet before a board of examiners made up of both MDs and RRTs, who were often the icons of the profession. I took the final oral exams that were ever given, administered at the AARC annual meeting in Las Vegas on November 8, 1978.

My fourth mentor, Jim Allen, was hired as director of respiratory services at Erlanger Medical Center shortly after I began work there as the 11-7 shift supervisor upon graduation from RT school. Jim broadened my horizons as an RT professional and encouraged me to become more active in the professional organization, the AART (now AARC), which I had joined as a student in 1973.

about the author...

Tom F. Colley is a senior active member of the AARC who is enjoying retired life in Ooltewah, TN.

Many changes

My career began well before the computer age, and I saw enormous technical changes over the years. I served in many roles, as a supervisor, mid-manager, and clinical instructor. The exponential growth of RT services at Erlanger by 1979–1980 allowed me the opportunity to develop multi-disciplinary laboratories, which included the plans for the first sleep laboratory at the hospital.

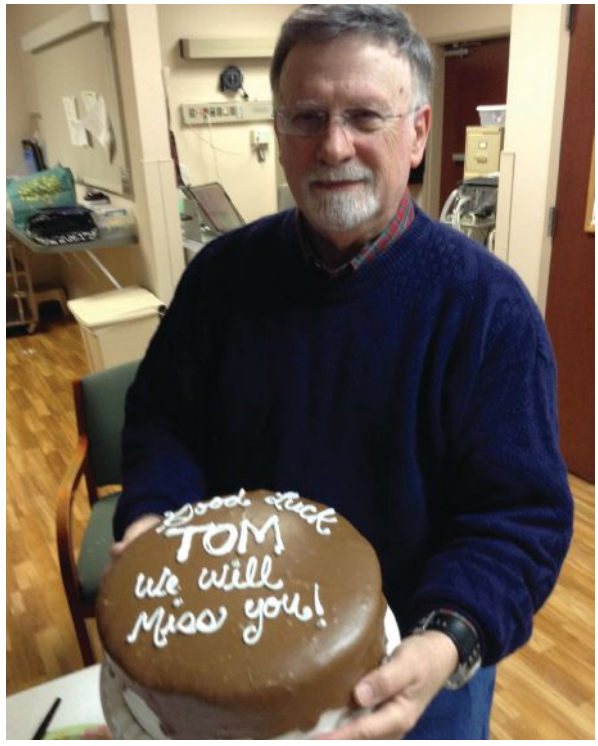
New opportunities led to my taking a position with a private health care system, where, as part of a team of progressive RTs, I helped introduce therapist-driven protocols to the area in the mid-1990s. This proved to be one of my most satisfying and rewarding experiences as a bedside practitioner.

I also served in many roles in our local and state Tennessee Society for Respiratory Care organizations. The 1980s were a challenging time for RT professionals in Tennessee: we not only tackled the necessity of a state license, but also were threatened with the loss of our ability to analyze arterial blood gases. It was during this time that Governor Lamar Alexander appointed me as the first RT to the State Laboratory Advisory Board.

Colley enjoys mowing the lawn on his new "retirement toy."

Feeling lucky

When one considers how many people reportedly hate their jobs, I have been lucky indeed to have had such a long and varied career within the same profession. I would be remiss if I did not acknowledge a debt of gratitude to the four mentors who helped me build a rewarding career. ■



Tom Colley posed with the cake that co-workers presented to him at his retirement party.

American Respiratory Care Foundation

Every year the American Respiratory Care Foundation (ARCF) joins with sponsors from the health industry to award over $30,000 to respiratory therapists and physicians through its education recognition, fellowships, grants and awards programs.

Award Programs

For more information, or to apply for one of these awards, contact the ARCF Executive Office, 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063-4706, (972) 243-2272, fax (972) 484-2720, email Crystal.Maldonado@aarc.org

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