

# The Coalition Chronicle

Coalition for Baccalaureate and Graduate Respiratory Therapy Education

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## Spotlight: Mayo Clinic Respiratory Care

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### Respiratory Care Mayo Clinic, Rochester, Minnesota from Past to the Present

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### The Past

The Mayo Clinic began as surgeon Dr. William Worrall Mayo started a solo medical practice in Rochester in 1883; he was put in charge of medical care after the SE Minnesota farming community was devastated by a tornado. Dr. W.W Mayo's began a family practice with the addition of his physician sons Charles and William H. That soon expanded into a group practice in the 1890s, which later evolved into a team with an integrated multispecialty approach. To

accommodate hospitalized patients, St. Marys Hospital was opened in 1889 by the Sisters of St. Francis. In 1919, the Mayo brothers donated their assets to transform the private partnership into a not-for-profit organization. The mission was to integrate clinical patient care with medical education, and research (known as the three Mayo shields). This unique approach established Mayo's international prominence.

During World War II, Mayo's Aero Medical Unit's researchers were instrumental in developing oxygen masks [Boothby-Lovelace-Bulbulian (BLB)] and the G-suit. These allowed pilots to fly at high-altitude and avoid physiologic stresses of combat flight. One physician on that team was H.F. Helmholz, Jr, MD. Prior to the war he had been active in the pulmonary function-basal metabolism labs as well as oxygen therapy and iron lung ventilation for hospitalized patients. He recruited janitors to be oxygen orderlies. Fred Helmholz also provided expertise in the transition to positive pressure ventilators which were used in post-operative care units for Mayo's growing cardiac surgery programs. However, by the early 1960s, the demand exceeded the ability of this one physician to consult on post-op care day or night. In addition, by 1957 the Rochester Methodist Hospital was added to the Mayo campus which further increased need for inpatient care. In response, by 1966 Mayo Department of Anesthesiology opened designated respiratory intensive care units at both hospitals and provided physician consultation for mechanically ventilated patients in all areas such as post-operative cardiac surgery.

Developing respiratory therapy support for the newly opened ICUs was entrusted to Bernard Gilles, CRNA, RRT. In 1971, Mayo approved formation of a section of respiratory intensive care which combined expertise of both anesthesiologists and pulmonary internists. With the increased need for trained staff to care for pulmonary-compromised patients in Mayo's Intensive Care Units, anesthesiologist Dr. E. Paul Didier, Bernie Gilles, with assistance from Dr. Helmholz, initiated a formal program to train therapists. The Mayo School of Allied Health affiliated with Rochester State Junior College to establish the program in 1972; Bernie Gilles was appointed coordinator for both the respiratory therapy service and the school.

The first class of respiratory therapists graduated from the new school in 1973. Awaiting them were newly purchased "volume-preset" ventilators with "positive end-expiratory pressure," which were considered quite an improvement over the pressure-limited Bird ventilators then in use. With new technology, a dedicated group of physicians, and well-prepared therapists, the practice flourished. New graduates found themselves working alongside physicians with all the latest technology. Besides management of mechanical ventilators, they

assisted in placement of Swan Ganz catheters and with fiberoptic bronchoscopy, performed cardiac outputs, placed arterial lines and performed arterial blood gas analyses.

By the 1980s the therapists' responsibilities increased and broadened in response to increased level of patient acuity, advancing technology and previously unmet clinical needs. Besides caring for patients in ICUs, blood gas laboratories, chest physical therapy/bronchial hygiene and tracheostomy care became part of therapists' work. In response to the evolving levels of therapist responsibilities, the respiratory therapy program moved to a 4-year level in 2002. This was established in conjunction with the University of Minnesota.

## The Present

The Mayo Clinic currently employs over 4,500 physicians and scientists with 58,400 allied health and administrative staff in Rochester and campuses in Scottsdale, AZ and Jacksonville, FL. The Mayo Health System has affiliated facilities in Minnesota, Wisconsin, and Iowa.

The respiratory therapy services at Mayo-Rochester include 280 staff of which 233 are respiratory therapist; there are also over 50 support staff. The department is one of the largest respiratory care groups in the nation. As part of the Departments of Anesthesiology and Perioperative Medicine, staff therapists continue to work closely with both anesthesia and pulmonary critical care physicians. They are driven by the department's vision that, "the needs of the patient come first, and the needs of our staff come second." The total number of beds in both Mayo-Rochester hospitals is 2,060. Therapists cover 10 ICUs at St. Marys Hospital which encompasses 200 ICU beds. Therapist groups cover subspecialties in areas such as pediatrics and adult (ground & air) transport. They work alongside physicians, nurses, and other health care professionals; respiratory therapists have become a vital member of the health care team. Though mechanical ventilation and hemodynamic monitoring are an integral focus of patient care for therapists at Mayo, they also serve in Mayo's Pre-Operative Evaluation Clinic, pulmonary rehabilitation, patient education, pulmonary function labs, a 76-bed emergency department, clinical research, clinical simulation training, hyperbaric oxygen therapy, and with the ECMO (extra corporeal membrane oxygenation) team.

**MAYO CLINIC** The respiratory therapy practice continues its Mayo tradition of support for education with staff serving as instructors and preceptors for students enrolled in the Mayo Respiratory Care Program as well as assisting with the education of nurses, other allied health professionals plus intensive care residents and fellows.



To complement the three-shield mission of clinical practice-education-research, therapists are also members of the Anesthesia Clinical Research Unit (ACRU) team.

## Pre-Operative Evaluation



The Pre-Operative Evaluation (POE) Clinic is a place where patients undergoing ambulatory surgery come to be evaluated prior to their surgical procedures. The POE therapist participates in and oversees the pre-operative evaluation and preparation in an outpatient clinic. Therapists conduct a screening interview and assess each patient for pre-existing medical conditions or potential risk factors that may influence the conduct of anesthesia and surgery. Therapists provide assessment, education, and coordination of testing as well as the testing itself.

Electrocardiograms and venous blood draws are part of the onsite testing offered. POE therapists work closely with anesthesiologists, residents, nurse practitioners and physician assistants. The therapists ensure that all appropriate stages in the pre-operative pathway have been expedited and completed. Other duties include supporting and participating in patient research studies. Patients and physicians alike appreciate the efficient and thorough exams done by the POE staff.

## Pediatric/Neonatal Transport

The pediatric workgroup is a specialty area within the respiratory therapy department. The workgroup consists of 30 clinical specialists who provide respiratory care to the pediatric and neonatal intensive care units, as well as the pediatric general care areas. Pediatric specialists are part of the Pediatric/Neonatal



Transport team, providing respiratory support on helicopter, fixed wing, and ground transports. They also are on the hospital emergency response team and hospital rapid response team and are involved with clinical research. Pediatric therapists work collaboratively with nursing, physicians and outside vendors, alongside other allied health professionals, and are a highly respected part of the health care team.

## Adult Transport



Since the early 1990s, respiratory therapists have played a key role in transporting critically ill patients to and from Mayo Clinic. Therapists are an integral part of the transport team, working alongside flight nurses and paramedics to ensure safe transport of critically ill patients. Currently, a team of six therapists share on-call duties on a 24/7 basis. Transports may occur via ground ambulance or fixed wing air ambulance. Therapists in this role must be able to adapt to changing, challenging clinical situations and work seamlessly with team members.

## ECMO (Extra-Corporeal Membrane Oxygenation)

The ECMO team provides severely ill patients in cardiac/respiratory failure with state-of-the-art lifesaving mechanical support to allow return of organ function or serve as a bridge to transplantation. Respiratory therapists are part of the ECMO multidisciplinary team, which also includes physicians and nurses. ECMO specialists at Mayo use the latest technology in caring for these severely ill patients. ECMO specialists are a highly motivated group and attend numerous proficiency and training drills throughout the year. They attend proficiency labs, Mortality and Morbidity conferences, and lectures, and participate in emergency scenario drills.



## Research



The Anesthesia Clinical Research Unit (ACRU) is a dedicated team of clinical research professionals within Mayo's Department of Anesthesiology. ACRU is part of the respiratory care department and members include respiratory therapists, nurses and other staff as needed. Its mission is to provide support to faculty and pharmaceutical sponsors for research within the fields of anesthesiology, critical care, and pain management. Areas of assistance may include data collection, clinical trial design, pharmacologic consultation, statistical analysis, analytical methodology and budget development. In many cases the role as a study coordinator sparks many RT coordinators to peruse research of their own. Which has led to writing

and presenting abstracts and or posters at the AARC open forms or other national conferences.

## Education

For respiratory therapists who have an interest in teaching, there are ample opportunities both within and outside the department. Supported by the department's education coordinator and the management group, interested staff can participate either as instructors or assistants in a wide variety of educational settings. Groups benefitting from Mayo staff educators include physicians, nurses, nurse aides, radiography professionals, physical therapists, sonographers, and students. Respiratory therapist staff can be preceptors for students and new hires. Staff educators also play a crucial role in the education of providers in the use of mechanical ventilation. Working closely with the education coordinator, supervisors and respiratory school staff, preceptors play a vital role in educating new staff as well as students.



## Hospital Pulmonary Rehabilitation

Inpatient pulmonary rehabilitation involves respiratory therapists as well as physical therapists. Many patients seen for pulmonary rehabilitation are from the thoracic surgery step-down unit on Francis 5C, though referrals also may come from other units at Saint Mary's



Hospital. Patients often have undergone thoracotomy, esophagectomy, lung transplantation or pulmonary thromboendarterectomy, or are being treated for COPD. Pulmonary rehabilitation provides a controlled environment under the supervision of a physical therapist or respiratory therapist. Patients utilize

treadmills, exercise bikes, recumbent steppers, or free walking for endurance training. Exercise bands are used for strength training. Exercise sessions combine the routine measurements of oxygen saturation, blood pressure, heart rate, EKG, respiratory rate, and perceived levels of exertion. The short-term goal of exercise therapy is to facilitate the recovery of thoracic surgical patients who have an increased risk of respiratory complications. The long-term goal is to improve the patient's exercise tolerance, endurance, and functional capabilities.

## Hyperbaric Oxygen Therapy



A team of six respiratory therapists play a key role in providing hyperbaric oxygen therapy to some of the most seriously ill patients -- those requiring mechanical ventilation. Therapists accompany these patients into the chamber and ensure that airway

and mechanical ventilation needs are met. The HBOT team accepts ICU and non-ICU patients for treatment seven days a week.



## Respiratory Therapy Department Leadership Team

Todd Meyer MS, BS, RRT, LRT – Director Respiratory Care

### **Clinical Supervisor:**

Sam Anthony, BS, RRT, LRT – Rotator group/Respiratory Care Unit/Outpatient testing

Pete Smith, RRT, LRT – Surgical ICU

Tanner Hill, BS, RRT, LRT – Trauma ICU/ED/Adult transport

Holly Behrns, BS, RRT, LRT – Medical ICU/Medical Surgical ICU/

William Clark, BS, RRT, LRT – Education Group

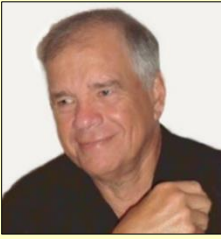
Tammy Schultz, MBA, BS, RRT, LRT – NICU ICU/PICU ICU/Labor delivery unit/ Pediatric transport

James Baker, MS, BS, RRT, LRT – Both adult and pediatric post Cardiac Surgical ICU/internal transport team

## Contact Information

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## INTERVIEW



### Ray Masferrer RRT FAARC Editor Emeritus *Respiratory Care*

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By Jeff Ward, MEd, RRT, FAARC  
Mayo Clinic Multidisciplinary Medical Simulation Center  
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**1. Tell us about your early days as a respiratory therapist.  
- What initially brought you into the profession and moved  
you further?**

In 1960, at the age of 16, I immigrated to the United States from Cuba without knowing a word of English. I enrolled at the University of Dallas in 1963 as part of my plan to be a lawyer; there were no inhalation therapy programs at that time. Like most of us who went to work in inhalation therapy in the early 1960s, I needed a job, any job. On September 2, 1963 I began my 11-7 fulltime job in the inhalation therapy department at Parkland Hospital, the county hospital in Dallas, TX. My salary was \$1.15 an hour. Back then and to this day, Parkland is the teaching hospital for the University of Texas (UT) Southwestern Medical School.

In the beginning, working at Parkland Hospital was just another job and not very inspiring. The main parts of the work included moving large oxygen cylinders to and from the patient rooms since the rooms were not piped with oxygen. I also washed and sterilized equipment and supplies (disposables did not exist back then). To this day, more than 58 years since my first day at Parkland, I vividly remember watching a tracheostomy procedure in the room of a young man. That experience was life changing. It helped me see that inhalation therapy was as close as I could get to help someone in real need of medical care without being a physician or a nurse...I could make a difference and still pursue my hope to be a lawyer. I also told myself that I wanted to learn everything inhalation therapy was all about. The Inhalation Therapy Association (now the AARC) was only 16 years old, and the profession was so young that there were not even any textbooks to learn from. There was, however, a relatively new book entitled *The Lung* by Julius Conroe, a pulmonary physician in San Francisco. The book detailed the anatomy and physiology of the lungs in a manner never described before. Reading that book (a few times), provided a tremendous foundation of information. *The Lung* gave me the idea that I should question more of the *why* and *how* inhalation therapy should be properly practiced.



## **2. Who were your mentors?**

### **-What/how did they contribute to your career?**

As an immigrant in this great country, I immediately realized that if I were going to get anywhere in life, I needed to learn a lot about everything and that I would greatly benefit by associating with smart people. At Parkland I had a unique opportunity to watch and tag along with two brilliant pulmonologists and professors of medicine at UT Southwestern: doctors Alan K. Pierce and William F. Miller. Dr. Pierce also served as the medical director of Parkland's inhalation therapy department and chief of the pulmonary division at UT Southwestern.

By the time I graduated from college with a liberal arts education in 1967, Dr. Pierce had just started a training program for physicians as pulmonary fellows. His role as medical director, also helped him realize the IT department needed more "technicians." He convinced Parkland's administration to increase the number of employees in the department from 10 to 90 and hire an individual with a college degree to lead the department. Voila--I happened to be at the right place at the right time as Dr. Pierce offered me the opportunity to be the department director. Looking back, that was a great break of my working life as our first child had just been born and I needed a better paying job. I then gave up on my dreams of being lawyer. At age 24 I was now in charge of a department with 90 employees. The staff had all transferred from being nurse aides; many were old enough to be my mother or father and most of them made the point of letting me know that. In addition to being the department director, I also had to teach everyone what inhalation therapy was all about. That included how to do the different procedures and do them right, to motivate everyone to come to work 24-7, and to love their jobs. I did not sleep much at first and soon recognized that I needed a crash course on leadership. I worked harder and longer than anyone else in the department, I learned by making mistakes, correcting mistakes ASAP, and being the biggest critic of my actions.

All along Dr. Pierce gave me his full support. He encouraged me to look at patient care with a critical eye, to read the medical literature, to never assume that standard procedures were right, and that all patient procedures need to be supported by clinical trials. Dr. Pierce asked me to work with the pulmonary fellows and their research projects, and to teach them what inhalation therapy was all about. My work with the pulmonary fellows quickly taught me what statistical significance meant and its importance when administering medical care. That led to me tagging along when the fellows presented their projects at scientific meetings like the Annual Congress of the American Thoracic Society. Again, I was at the right place at the right time and got exposed to brilliant individuals from whom I learned more than I ever taught them.

### **3. What got you on your path to AARC Congress organizer and *Respiratory Care Journal's* manager?**

In 1969 I published my first article in *Respiratory Care*. Soon thereafter, the newly appointed full-time editor, Phil Kittredge, called me about his plans for the publication and asked for my help. I was in awe by Phil's request and did everything and anything he asked of me. Phil's call was the beginning of my 48-year relationship with the Journal. During that time *Respiratory Care* went from a publication overseen by an AARC-appointed committee with no idea what an association journal was all about, to a world-wide recognized peer-reviewed publication managing more than 1,000 submissions annually. It developed a top-notch editorial staff led by editors recognized as the foremost clinical experts in our profession, and an editorial board comprised of published therapists and physicians with established credentials as clinicians and researchers. The result was its inclusion in PubMed (Index Medicus) and being respected and admired in the United States and around the world.

In 1981 Sam Giordano became AARC executive director and publisher of *Respiratory Care*. I soon followed Sam as associate executive director with many new responsibilities, the most important in my eyes being the Journal's managing editor. Sam was always a staunch supporter of the Journal and shared the same vision the staff, editors, and editorial board members had for the publication. Many people should take credit for the Journal's success, but I can unequivocally say that without Sam's support and vision it would not be the premier medical publication we now have. Looking back at my years in respiratory care, my association with *Respiratory Care* brought me the most happiness and the one I am the proudest of. To this day, every month when I receive the printed copy of the Journal, I hold it in my hands and tell myself "Wow! We have come a long, long way" and think of and thank all the people that made it happen. On a related note, I have always felt that medical societies like the AARC are created to represent the interests of professionals, to advance the profession, and to promulgate proper patient care; but like other societies they all need validity for their existence, and nothing proves that more than a peer-reviewed journal questioning and proving the benefits of all aspects of patient care. We are blessed to have such a publication.

My responsibilities with the AARC meetings and its Annual Congress followed a somewhat similar path as my involvement with the Journal. I had joined the AARC in 1964 and attended my first annual meeting in 1968. At that event, I felt the presentations were not teaching me much; many talks were based more on the lecturer's personal opinions or textbook material and not proof from current science. I also noticed that almost 100% of the presentations were by physicians.

I remember telling myself our professional meetings could be better. That led to conversations with Drs. Miller and Pierce about my concerns. Dr. Miller encouraged me to continue and improve my work with the Journal; Dr. Pierce suggested that I look at the projects I was involved with the pulmonary fellows and consider submitting an abstract for possible presentation at the AARC Annual Meeting. In 1973 we submitted our first abstract to the AARC Program Committee based on guidelines which the fellows and others followed when submitting research-based abstracts to meetings like ATS, ACCP, etc.

At the AARC's Program Committee's meeting in Dallas to plan the annual meeting, they asked me to come by and explain what we had in mind with our submission because they had never received an abstract of a presentation based on research. The committee not only accepted our presentation but also asked me to join as a committee member. They realized the importance of getting therapists to question the *why's* and *how's* of their daily practice, to do research, and to present their findings at the AARC meeting. I am proud our first abstract presentation led to the creation of the Open Forum. To this day, the Open Forum is the most anticipated, educationally significant, and exciting event at the AARC Congress. My work with AARC meetings and the Congress lasted for 37 years, from 1974-2011.

#### **4. What are some key lessons you learned as a clinician, and active participant in the professional organization?**

I would admit I was very lucky that my first job in respiratory care was at Parkland Hospital. Parkland was the perfect opportunity to learn about inhalation therapy, equipment, pulmonary physiology, research, leadership, and communication. Parkland's association with UT Southwestern Medical School got me exposed to some of the most brilliant pulmonary physicians at the time. They were eager to teach others what they knew and in me they found someone eager to learn. Among many things, I learned never to accept anything at face value; to read and re-read the medical literature and apply their findings to my practice of respiratory care; to always associate myself with people smarter than me; and that because someone sounds good does not mean they know what they are talking about.

I am glad I joined the AARC a year after I first went to work in inhalation therapy. As I learned more about the profession and the association, I realized one couldn't exist without the other. It was clear other components were essential if the profession was to survive: dedicated workers with good educational backgrounds; a respected peer-reviewed journal included in PubMed; the best and largest respiratory care meeting in the world; clinical practice guidelines dictating the right ways to practice respiratory care; and leaders who excel not

because of what they say but because of what they know. I saw the opportunity and immediately realized the AARC was the perfect avenue for me to learn from and to share with others what I knew.

### **5. What would you recommend to new graduate therapists just beginning their career?**

Others have asked me this question since my retirement in 2017, so I hope my latest version of the same answer satisfies the readers. What has stayed with me after 54 years as a respiratory therapist?

- Being a healthcare provider is very self-satisfying and good for your ego, but it will also tear you apart many times and you must learn how to deal with the bad times. Trust me, in the long run the good outdoes the bad, by far.
- I learned more than I ever thought I could. But there is much more you and the rest of us need to learn. Medical care is that way, it changes by the hour and many factors contribute to those changes. Learning never ends. Aim to be the best respiratory therapist anywhere.
- As you practice respiratory care you will meet people from whom you can expand your knowledge, not only about how to best take care of patients, but about life in general. Take advantage of those opportunities and treasure those relationships.
- To be the best that one can be you must look at the job as more than 40 hours a week job...you are going to have to look at the bigger picture. You are going to have to put extra time to keep abreast of what is new; you need to train yourself to read the medical literature; you need to do voluntary professional work; you must question and find positive answers to how patients are treated; and you need to establish and keep professional relationships. The opportunities for you are countless and you can advance as far as you want, but it is up to you and no one else.
- And lastly, but most important, everything comes down to patient care and your responsibility to *always* do what is right for the patient...and I emphasize *always*. Every patient is different in just about every aspect. You have many tools and techniques available to treat patients, but remember, none of those tools is 100% effective. Whenever you care for a patient, think of how you wanted a dear one to you being cared for and do so!

## **CoBGRTE - NBRC Supported Pre-Doctoral Fellowships**

**José D Rojas, PhD, RRT, RPFT, FAARC**

**Chair, Scholarship Committee**

Nearly four score years ago our profession was born and in this 75<sup>th</sup> year of its existence, I paraphrase Abraham Lincoln's Gettysburg address comments to draw comparison. The comments in that famous address were spoken during a great time of turmoil in our nation's history at the dedication of the Gettysburg Memorial meant to honor those who had sacrificed all in the name of their opposing beliefs. Lincoln stated that "it is for the living to be dedicated to their unfinished work." That draws parallels to where our profession finds itself today. How does the profession advance? The giants in our profession saw the answer to this and knew it could only happen through efforts to increase knowledge and educational preparation. The precursor of the AARC was chartered as a not-for-profit association called the Inhalation Therapy Association on April 15, 1947.<sup>1</sup> In the articles of incorporation their stated objectives were to: a) promote higher standards in methods and the professional advancement of members of the Association; b) create mutual understanding and cooperation between the Technician and physician and all others who are employed in the interest of individual or public health, through the Tri-State Hospital Assembly; and c) advance the knowledge of Inhalation Therapy through institutes, lectures, and other means given under the sponsorship of doctors of the Society of Anesthesia.<sup>2</sup>

CoBGRTE continues that quest through continued scholarship support for students pursuing baccalaureate and graduate respiratory care education. To date, CoBGRTE has provided support of \$45,000 for students to pursue their education.

This year we begin what we hope to be the annual awarding of NBRC supported scholarships for registered respiratory therapists who are CoBGRTE members pursuing doctoral degrees. According to the 2020 AARC Human Resource Survey, only 1% of respiratory therapists have completed a doctoral degree.<sup>3</sup> Although the application period was short, we had 10 excellent applicants who provided inspiring proposals and are in the process of completing their doctoral degrees. CoBGRTE and the scholarship committee wish that we had the resources to support all who applied. The decision on which application to support was difficult. After all applications were vetted by the Scholarship Committee and the Executive Committee of the CoBGRTE Board of Directors, both committees are pleased to announce this year's recipients of \$10,000

awards (in alphabetical order). The following are brief bio sketches of each recipient and a summary of their vision statement/proposal.

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**Jennifer L. Keely, MEd, RRT, RRT-ACCS, RCP, Interim Program Director, University of Missouri, Respiratory Therapy Program.** Jennifer Keely began her career in respiratory care after serving in the United States Air Force and has been a registered therapist for twenty years, fourteen of which have been spent as a respiratory therapy (RT) educator. She earned a Bachelor of Health Sciences degree in Respiratory Therapy with a minor in Music from the University of Missouri in 2001. She went on to complete

her MEd from the University of Missouri with a concentration in higher and continuing education. She began her doctoral studies in 2021. Ms. Keely has been teaching at the University of Missouri since 2008 and currently serves as the interim Program Director for the University of Missouri Respiratory Therapy Program in the Department of Clinical and Diagnostic Sciences in the School of Health Professions. Ms. Keeley holds the academic rank of Assistant Clinical Professor. She has been an invited speaker at three AARC Summer Forum meetings and co-authored a textbook chapter.



**Khamron Micheals, MHA, RRT, 2<sup>nd</sup> year PhD Student, Division of Rehabilitation Sciences, Graduate School of Biomedical Sciences, University of Texas Medical Branch.** Khamron Michaels has been a respiratory therapist for 6 years. Initially, he became fascinated with health sciences and medicine early in high school by one of his peer's parents who practiced pharmacy. Once he was allowed to attend the University of Texas Medical Branch at Galveston's (UTMB) School of Health Professions for

Respiratory Care, he states “I felt like he was walking in my purpose.” He began his career as a respiratory care practitioner, to become more aware of healthcare

discrepancies and injustices, and pursued a Master's in Healthcare Administration at Texas Southern University (TSU). His experience at TSU led to being introduced to gathering and conducting research, which motivated him to want to further his education through UTMB's graduate school of biomedical sciences, rehabilitation science division. Currently, he is performing research with Dr. Jose' Rojas, his former undergraduate Respiratory Care director, looking at lung determinants and COVID-19 infection. Being a first-generation college graduate, his family and Khamron are highly enthused about the progression he has made in the academic realm thus far. He plans to continue to progress as an academic researcher and pursue a post-doctoral training in the future. The skills that he absorbs throughout his studies will contribute to long-term goals, including becoming a tenured track professor at the university level and potentially combatting healthcare inequalities.

## **Vision Statement**

### **Profession-wide Change Must Be Personal**

**Jennifer L. Keely, MEd, RRT, RRT-ACCS, RCP**

If one spends any amount time with respiratory therapists (RT), the conversation often turns to familiar topics: dissatisfaction with treatment by hospital administration, lack of autonomy and the public's unfamiliarity with the profession. This is true at RT conferences, in online discussion forums, RT publications, and in RT breakrooms. Aside from allowing clinicians to voice our shared frustrations, what purpose do these laments serve? In my experience, little comes out of these conversations. Rather than being mobilized to action to address the issue, many conclude that the problem can only be addressed at the macro level by our professional organizations and then complain when change does not come about quickly enough. While the advocacy of our professional organizations is essential, what if there were widespread acknowledgement that the ability to effect change in our profession rested more with individual clinicians? What if, to be treated as equals with other health disciplines, we recognize that all of us must demonstrate commitment to education and continued professional growth? It cannot just be the leaders among us; it must be the bedside clinicians who recognize the importance of more education and respiratory therapist-directed research. The problem is that most RT programs do not have room in their curricula to teach students how to become researchers or, if they do have the time, their faculty are not skilled researchers themselves.

Though the amount of RT-authored clinical research has increased in recent years, there is little examination of sociological factors that impact the profession.

There is considerable literature that addresses the experiences of nurses and nursing students in professional socialization and occupational prestige, but efforts to find similar literature about RT are often fruitless. One must refer to literature written about nursing and generalize to RT, which is problematic given nursing's longer history. Further, the RT profession has consistently struggled to justify its existence and need for autonomy in a way that nursing has not. As a science-based discipline, RT literature does not typically, if ever, address sociological concepts such as occupational prestige. However, examination of this concept and its application to the respiratory therapy profession is indicated if we are to more fully understand the factors that draw people to a profession or cause them to leave it.

RT educators have been hopeful that enrollment in their programs would increase because of the pandemic publicity, assuming that the public's lack of familiarity with the profession was to blame for persistently low student interest. However, enrollment in RT programs fell in both the spring of 2021 and the preceding fall of 2020,<sup>1</sup> highlighting the fact that other factors might impact not only clinician's choices to stay in a profession, but students' choices to join the profession to begin with.<sup>2,3</sup> Since 92,000 of 140,000 currently practicing RTs are expected to leave the profession by 2030 (<https://www.moreerts.com/growing-need/>), the need to understand why so few people choose to become RTs is urgent. Advocates for the continued accreditation of associate's degree RT programs do not address the impact of minimum education requirements on the prestige, and therefore, desirability of a profession, despite well-documented evidence of correlation.<sup>4,5,6</sup> The need to examine the impact of a profession's minimum education requirement on occupational prestige seems most pressing, particularly given RT's clinician shortage and the CoARC's recent policy reversal regarding the entry level degree requirement for RT.

### **Determinants of Career Choices**

Students make their career choices based on a complex interaction of factors, such as societal depictions, future earnings, professional socialization, contribution to societal good, and occupational prestige.<sup>7,8,9</sup> While expected earnings and a student's ability are rated as significant determinants in college major choice, more subjective factors weigh heavily in students' career choices. Numerous factors have been proposed as determinants of occupational prestige, with some of the most common being a profession's contribution to societal good and minimal education requirements.<sup>7</sup> The sophistication of skills performed by members of an occupation, whether they are manual or intellectual, improves occupational prestige. However, the required skill weighs more heavily in occupations with larger training requirements than in those with few.<sup>6</sup> This might



explain why RTs' management of increasingly sophisticated ventilation methods and the broadening scope of our role does not garner the same level of respect as other health professions that require more education, such as physical therapy.

The concept of occupational prestige warrants deeper discussion than is possible here, but I will close with two points. First, we must recognize that the educational standards we have in our profession have a definite impact on its prestige. It is encouraging to see increasing numbers of baccalaureate and graduate respiratory therapy programs being developed. This trend must continue and accelerate to advance the profession in a significant way. Secondly, the number of RT clinicians with the academic preparation to study sociological aspects that impact our profession must be increased. Historically, our profession has been comprised of no-nonsense pragmatists who are more interested in clinical matters than social theory. Of course, our reputation as clinical experts take priority, but the need to turn our attention to more abstract sociological aspects of our discipline cannot be ignored. Though we are seeing the impact of our inattention to these matters now in the form of dwindling interest in the profession, the situation is not irreversible. If clinicians recognize that fundamental change must start at the individual, personal level, the benefits to the profession in the areas of prestige and recognition will come. It will take time, which is why each of us must get started right now.

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## **Vision Statement**

### **Khamron Micheals, MHA, RRT**

Being a healthcare professional and a scientific researcher permits me the opportunity of analyzing science from an intrinsic perspective. Before my doctoral studies, my education consisted of a Bachelor of Science in Respiratory Care from The University of Texas Medical Branch at Galveston (UTMB) and a Master of Science in Healthcare Administration from Texas Southern University (TSU). Practicing as a registered respiratory therapist for numerous years, I appreciate being a community server and look forward to assisting the community with my scientific research.

Studies show that Coronavirus 2019 (COVID-19) has disproportionately affected communities of color, and protests over racial injustice in the US have focused on health care and health equity.<sup>1</sup> It is also shown that African American or black individuals are contracting COVID-19 at higher rates and are more likely to die.<sup>2</sup> In pursuit of my doctoral degree in Rehabilitation Sciences through the Graduate School of Biomedical Sciences at UTMB, I plan to potentially assist in these healthcare discrepancies on a broader scale than I could as a healthcare professional.

I look forward to using my scientific training to access large datasets to help mold healthcare policies, simultaneously utilizing large datasets, such as Medicare, N3C, TriNetX, and electronic medical records (EMRs) to explore respiratory-related outcomes and identify any disparities in health care access and/or delivery. I mainly focus on the acute care and rehabilitation needs of

patients affected by COVID-19. John's Hopkins reports that COVID-19 has infected more than 360 million people and contributes to more than 5 million deaths worldwide.<sup>3</sup> There is also a high prevalence of impaired lung function, decreased physical function, and substantial symptom burden in survivors of severe Covid-19 that required mechanical ventilation.<sup>4</sup> Research shows controversy on whether the cause of death in COVID-19 patients is directly related to the infection or underlying conditions.<sup>5</sup> On admission, compromised respiratory status (the primary driver of disease severity) is associated with worse outcomes.<sup>6</sup> A substantial proportion of patients with COVID-19 admitted to the ICU require invasive mechanical ventilation for acute respiratory distress syndrome (ARDS), which is still associated with a high mortality rate.<sup>7</sup> The relationship between chronic lung diseases and COVID-19 mortality has been poorly described in the literature thus far.

Currently, I am observing the relationship of lung determinants in association with mortality in patients diagnosed with COVID-19. This study aims to evaluate the changes in compliance and resistance and determine any association with a) comorbidities, b) the severity of COVID-19 infection, and c) ventilator management in patients positively diagnosed with a COVID-19 infection. Understanding the pattern of changes in compliance and resistance could provide diagnostic and therapeutic benefits in the management and treatment of COVID-19 pneumonia in contribution to public health. My research will persist in bridging the gap between clinical practice and scientific research while also addressing the controversy on whether mortality is related to healthcare-related issues or other factors. This research would assist public health by using lung determinants as a potential predictor for COVID-19 severity.

In patients classified with COVID-19–related mortality, the length of stay was more extensive than those with COVID-19 unrelated mortality, 14.2 and 8.2 days, respectively.<sup>5</sup> One cost analysis shows that reducing time to recovery by only one hospital day may save \$2118 per patient/day on average and reducing ICU length by one day would save \$3586 per patient/day on average.<sup>8</sup> Combatting the length of these patients' hospital stays could decrease mortality rates in the COVID-19 population and decrease economic costs.

Pulmonary rehabilitation is a cornerstone of treatment for chronic respiratory diseases.<sup>9</sup> I am collaborating with the interdisciplinary team at the Post COVID-19 clinic to analyze outcomes data for patients who have visited the clinic. A retrospective analysis, specifically on patients who have reported spirometry and participated in pulmonary rehabilitation, was approved to begin this spring. With this data collection, we would be able to analyze if pulmonary rehabilitation could

potentially improve quality of life in patients who continue to suffer from dyspnea after COVID-19 infection.

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## **CoBGRTE Membership Committee Update**

**Daneen Nastars, DHSc, RRT, RRT-ACCS, CTTS**

**CoBGRTE Membership Committee Chair**



The CoBGRTE membership committee is continuing to work hard to increase active memberships and student memberships. To be successful, we need people like our members and the hard-working members of the committee. The 2022 membership committee members are:

Daneen Nastars, DHSc, RRT, RRT-ACCS, CTTS-Chair

Tom Barnes, EdD, RRT, FAARC

Paul Eberle PhD, RRT, FAARC

Nancy Guyse, MSc, RRT, RRT-NPS, AE-C

Christy Kane, PhD, RRT, RRT-NPS, RRT-ACCS, AE-C, FAARC

Tim Op't Holt, EdD, RRT, AE-C, FAARC

Michele Pedicone, DHSc, RRT, RRT-NPS

Nate Rodrigues, MSIS, RRT, RRT-NPS, RRT-SDS, EMT-B

Aaron Roebuck, MS, RRT

J.J. Valdez, MSRC, RRT

Gary Wickman, MS, RRT, FAARC

Lee Wisdom, MHS, RRT, RRT-ACCS, RRT-NPS

COVID-19 continues to create challenges to membership recruitment, with our greatest recruiting events, AARC National Convention and AARC Summer Forum, being held Virtually in 2021. However, I am confident that the membership committee will continue to spread the word about the benefits of becoming a CoBGRTE member and how CoBGRTE continues to advance the profession. I call on all members to help promote membership and help us reach our goals in 2022.

Please encourage your colleagues working in hospitals, clinics, or education to join CoBGRTE and help to keep the profession moving forward. Converting student members to Active members is also a priority for the membership

committee. I encourage all educators to talk to your students about the value of CoBGRTE membership.

### **The 2022 Goals for the Membership Committee**

1. Increase active membership to: 400.
2. Increase institutional membership to: 75
3. Increase student membership to: 600
4. Convert 5% of student members to active members.
5. Increase corporate membership to four.
6. Recommend committee appointments for student members.
7. Prepare at least one call or promotion for membership in each issue of the Coalition Chronicle.

In addition, we are beginning year two with the membership management software, Join It. Many of you have chosen "optionally renew" to ensure your membership does not lapse. We are doing our best to ensure no issues arise, and I encourage anyone who has questions or has had problems with the new system to please reach out and let me know so we can make sure it is fixed or clear up any questions. If you have not renewed your CoBGRTE membership, the platform is user-friendly and if you have any questions, click on Contact Us, and we will get back to you as soon as possible. Join IT will also send out reminders for pending payments for those who choose optionally to renew and reminders for those who choose to renew their memberships manually each year. The Join IT membership management system will help us keep track of our members, allow members to access their membership, and make changes to your email, employment, or even your name.

Once you renew, you will receive payment confirmation, and attached to the confirmation email is your digital membership card. The digital membership card must be opened using your phone to be stored in your apple wallet or the passport app for android users. The new membership software has streamlined membership processing and will allow the membership committee time to recruit new members and convert student members to active memberships. We are always open to ways to improve membership, so please do not hesitate to reach out if you would like to join the membership committee or have any ideas.

I want to thank the membership committee for their hard work, and we are looking forward to a wonderful and productive year for Baccalaureate and Graduate Respiratory Care education.

# CoBGRTE Membership Committee Drawing

All 2022 Active Members Eligible

Win an Apple 10.2" iPad (9th Gen), 64 GB, Wi-Fi by  
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Catherine University, \*University of North Carolina-Wilmington,  
\*Augusta University, \*Upstate Medical University-Syracuse,  
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**ASRT to BSRT & MSRC Degree Advancement Programs**

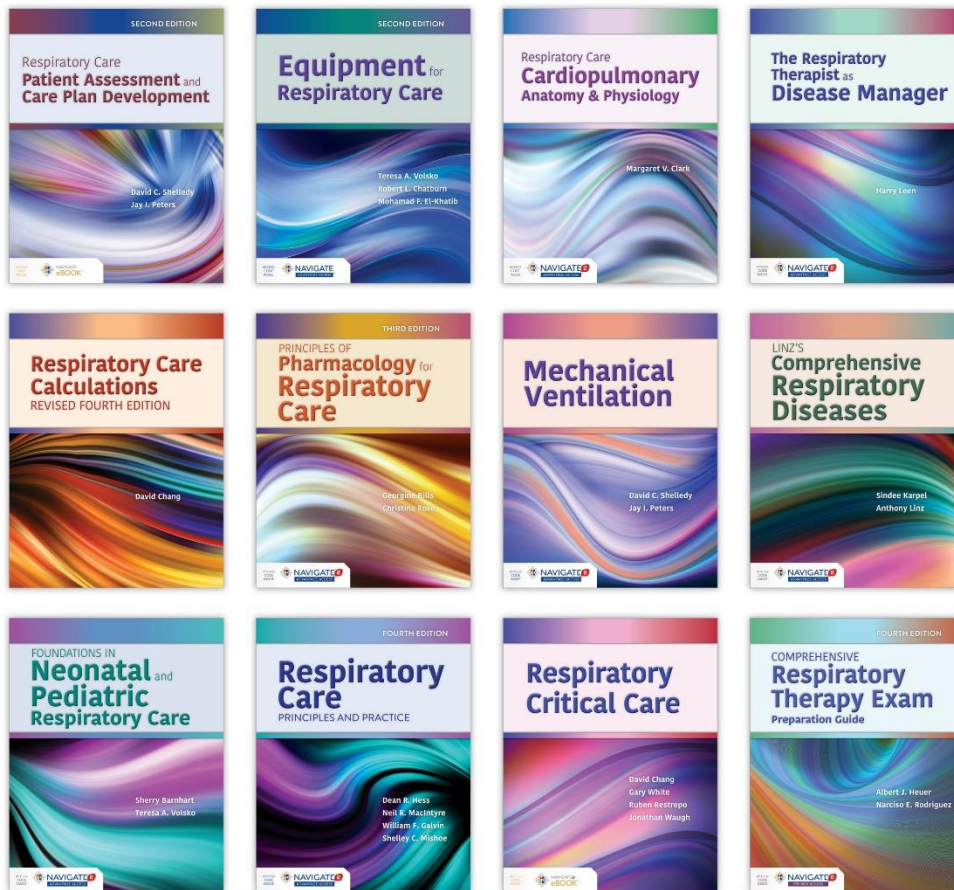
**BSRT and MSRT Entry Programs**

**Graduate Respiratory Therapist Programs**

**[www.CoBGRTE.org](http://www.CoBGRTE.org)**



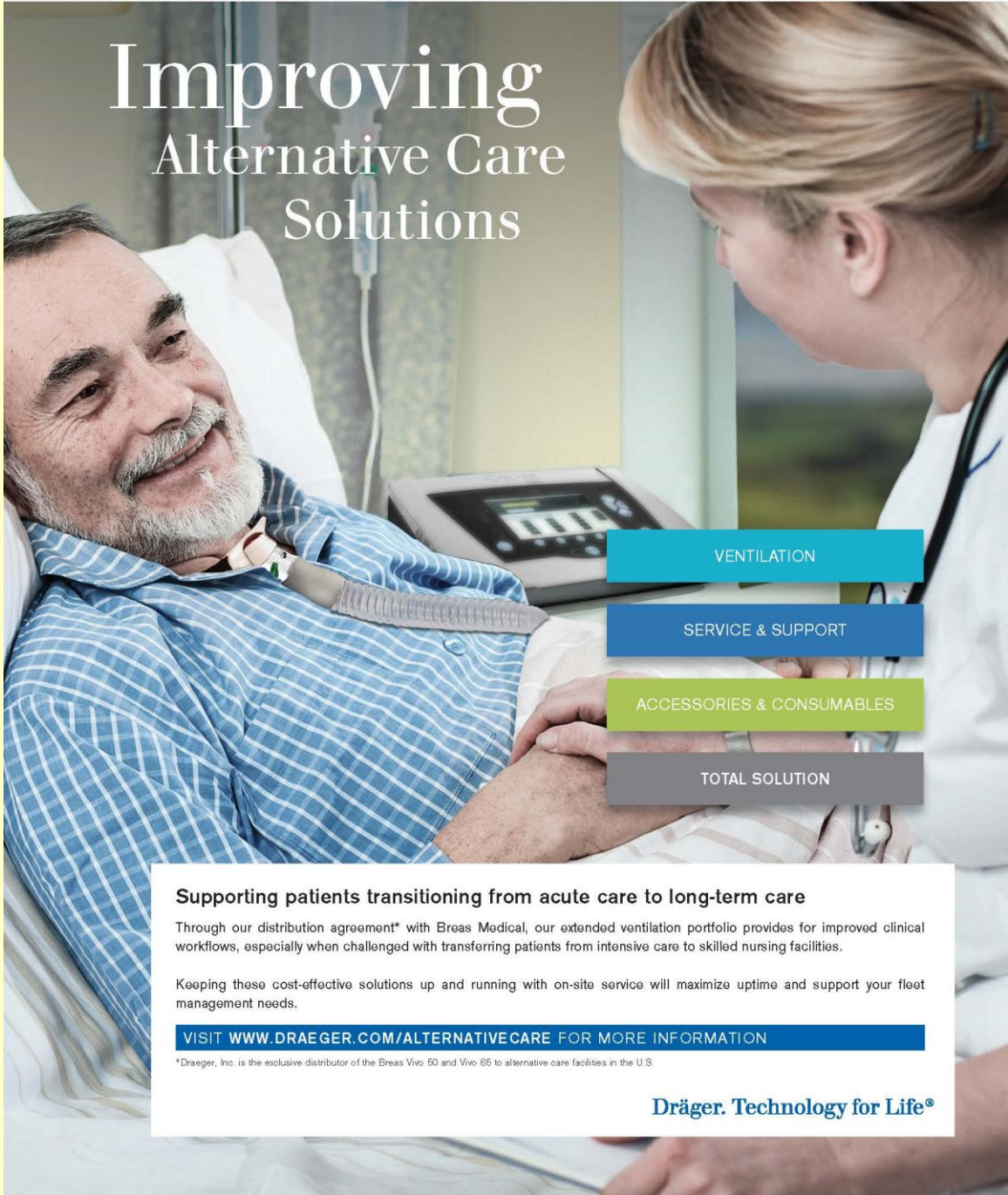
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## CoBGRTE Institutional Members - Continued

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Newberry College  
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University of Cincinnati  
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Northern Kentucky University  
Florida Southwestern State College  
University of Nebraska Medical Center  
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*If you have not already decided to become a CoBGRTE member after visiting [www.cobgrte.org](http://www.cobgrte.org), the following are 14 reasons why you should join the coalition.*

### **Reasons Why You Should Become a CoBGRTE Member**

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1. Award scholarships to baccalaureate and graduate respiratory therapy students.
2. Assist in the development of ASRT to BSRT Bridge Programs.
3. Collectively work towards the day when all respiratory therapists enter the profession with a baccalaureate or graduate degree in respiratory care.
4. Support a national association, representing the 70 colleges/universities awarding baccalaureate and graduate degrees in respiratory care, to move forward the recommendations of the third 2015 conference.
5. Help start new baccalaureate and graduate RT programs thus leading to a higher quality of respiratory therapist entering the workforce.
6. Work to change the image of the RT profession from technical-vocational-associate degree education to professional education at the baccalaureate and graduate degree level.
7. Mentoring program for new graduates as well as new faculty members.
8. Join colleagues to collectively develop standards for baccalaureate and graduate respiratory therapist education.
9. Develop public relations programs to make potential students aware of baccalaureate and graduate respiratory therapist programs.
10. Help to publicize, among department directors/managers, the differences between respiratory therapists with associate, baccalaureate and graduate degrees.
11. Access to over 75 Spotlight articles on BSRT and RT graduate programs, and major medical centers.
12. Round table discussion dinners and Meet & Greet member receptions held in conjunction with the AARC Summer Forum and the International Congress.
13. Help to support maintaining a roster and web site for all baccalaureate and graduate respiratory therapist programs.
14. Collaborate with CoARC and AARC to improve respiratory therapy education.

## Editorial Board

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