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## **Creating the Advanced Practice Respiratory Therapist (APRT)**

### **SUMMARY:**

This legislative proposal establishes the Advanced Practice Respiratory Therapist (APRT), a graduate level practitioner, specializing in cardiopulmonology, to be administered by the Respiratory Care Board.

### **BACKGROUND:**

- The APRT is a skilled graduate Respiratory Care Practitioner, qualified by academic and clinical education to provide diagnosis and treatment of respiratory diseases and disorders to patients under the supervision and responsibility of a pulmonologist, emergency physician or critical care physician via a contract with that supervising physician that outlines a defined scope of practice.
- As part of a physician-led team, APRTs are trained to provide diagnostic, therapeutic, critical and preventive respiratory care services in multiple settings across the health care spectrum including acute (emergency department or urgent care) and critical care, sub-acute, in-patient and preventative care, as well as chronic care, ambulatory, and out-patient care.
- APRTs take medical histories and record progress notes; examine, treat, and counsel patients; order and interpret laboratory tests, imaging studies, and diagnostics; and provide acute, critical, and chronic care to patients. This includes prescribing maintenance medications for COPD and asthma patients and care management. The value and importance of maintaining the physician-therapist relationship that has benefited patients with cardiopulmonary disease for many decades is preserved by having APRTs practice under the leadership of a physician.

## WHY:

- Currently, three of the top five causes of death are a result of cardiopulmonary disease. Importantly, the elderly population and incidence of cardiopulmonary disease are rising while the number of cardiologists and pulmonologists available to treat those diseases is expected to fall markedly. The physician shortfall could be as high as 120,000 professionals by 2030, severely affecting workforce capacity to care for these patients.
  - The [Association of American Medical Colleges \(AAMC\)](#) reports a [potential shortage of 120,000 cardiologists](#) by 2030. Likewise, the demand for pulmonologists is growing as more than [70 percent](#) of pulmonology physicians are 55 or older. A retiring workforce, aging population, and complications of a pandemic are driving these changes.
- There has been an increase in patients and the care each patient requires since COVID. Some report their patient backlog has tripled and wait times are often months. Some patients lose hope and simply go to the emergency room.
- California will need physician extenders to provide patient care coverage in areas lacking support from physicians. RTs must have access to the education, training, and clinical practice needed to support the treatment of cardiopulmonary patients.
- The APRT would give practicing respiratory therapists who desire a larger role in patient care the chance to broaden their scope of practice through advanced education and clinical practice.
- California has established high standards and a broad scope which makes it well situated to be on the forefront of this opportunity to create an advanced practitioner who specializes in respiratory care to reach more patients, more effectively.
- Respiratory Therapists have the ability to meet this rising need using our current specialized skillset and developing the advanced skills required to support the respiratory health care of patients we treat inside and outside of the hospital on a daily basis now.

**WHAT:**

- The Advanced Practice Respiratory Therapist will require the successful completion of a Commission on Accreditation for Respiratory Care (CoARC) accredited graduate level Advanced Practice Respiratory Therapist education and training program focused on advanced, evidence-based, diagnostic, and therapeutic clinical practice and disease management.
- Model Curriculum suggests qualified Respiratory Therapists would take 79 hours of advanced patient care, assessments, treatments, labs, professional skills, and clinical practice. 32 of the hours are specifically in clinical practice. There are currently no APRT programs in California. Loma Linda University is in the process of developing a program.

**WHERE:**

- The Maryland Department of Veterans Affairs currently has two practicing APRTs who were created by the DVA and passed an APRT program in Ohio.
- Ohio and North Carolina have legislation pending.

**CONCLUSION:**

The APRT would add a much-needed advanced practice respiratory care provider to care for patients with cardiopulmonary disease, and a new option within the respiratory care profession for those therapists and students who are interested in practicing at the graduate level.

## Potential Language: Advanced Practice Respiratory Therapist

### Legislative findings and declarations:

- (a) Currently, three of the top five causes of death are a result of cardiopulmonary disease. Importantly, the elderly population and incidence of cardiopulmonary disease are rising while the number of cardiologists and pulmonologists available to treat those diseases is expected to fall markedly. The physician shortfall could be as high as 120,000 professionals by 2030, severely affecting workforce capacity to care for these patients.
- (b) The Association of American Medical Colleges (AAMC) reports a potential shortage of 120,000 cardiologists by 2030. Likewise, the demand for pulmonologists is growing as more than 70 percent of pulmonology physicians are 55 or older. A retiring workforce, aging population, and complications of a pandemic are driving these changes.
- (c) There has been an increase in the number of patients and the care each patient requires since COVID. Some report their patient backlog has tripled and wait times are often months. Some patients lose hope and simply go to the emergency room.
- (d) California will need physician extenders to provide patient care coverage, especially in areas lacking support from physicians. Respiratory care practitioners must have access to the education, training, and clinical practice required to support the treatment of cardiopulmonary patients.
- (e) The advanced practice respiratory therapist would give practicing respiratory care practitioners who desire a larger role in patient care the ability to broaden their scope of practice through graduate education and clinical practice.
- (f) California has established high standards for respiratory care practitioners, which makes it well situated to be at the forefront of this opportunity to create an advanced practitioner who specializes in respiratory care to reach more patients, more effectively.
- (g) Respiratory care practitioners have the ability to meet this rising need using their current specialized skillset and developing the advanced skills required to support the respiratory health care of patients they treat inside and outside of the hospital on a daily basis currently.

Article 4.5 Advanced Practice Certification

**3743. (a) An advanced practice respiratory therapist is an advanced practice provider with graduate education and clinical training.**

**(b) A respiratory care practitioner who has met the following criteria may apply for an advanced practice respiratory therapist designation of their license to practice as an advanced practice respiratory therapist or “APRT” in accordance with this article.**

**(1) passed an advanced practice respiratory therapist academic and clinical education program that is accredited by the Commission on Accreditation for Respiratory Care (CoARC).**

**(2) passed the National Board for Respiratory Care outcome assessment demonstrating proficiency in advanced practice respiratory therapy.**

**3744. (a) An advanced practice respiratory therapist may practice under the supervision and responsibility of a pulmonologist, emergency physician or critical care physician.**

**(b) Advanced practice respiratory therapists may provide diagnostic, therapeutic, clinical and preventive respiratory care services in settings, including but not limited to, acute emergency department or urgent care, critical care, sub-acute, in-patient, and preventative care, as well as operating rooms, chronic care, ambulatory, and out-patient care.**

**(c) Advanced practice respiratory therapists may take medical histories and record progress notes; examine, treat, and counsel patients; order and interpret laboratory tests, imaging studies, and diagnostics; and provide acute, critical, and chronic care to patients. This includes prescribing maintenance medications and care management for chronic obstructive pulmonary disease (COPD) and asthma.**

**3748. (a) No person shall advertise or hold themselves out as an “Advanced Practice Respiratory Therapist” or use the abbreviation or letters APRT or any modification or derivatives of this abbreviation without a current and valid designation as an APRT issued by the board.**

**(b) No person shall engage in the advanced practice of respiratory therapy as identified in this Article without a current and valid designation as an APRT issued by the board.**

**(c) Nothing in this article limits physician’s assistants, or other healthcare providers, from practicing in any setting within the scope of their practice.**

**3748.2 The board may order the denial, suspension, or revocation of, or the imposition of probationary conditions upon, a license issued under this chapter and/or the APRT designation, for any cause outlined in this Chapter.**

## Scope of Practice Side by Side

### Respiratory Therapist

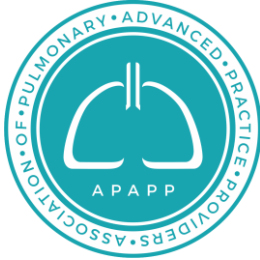
- Respiratory care practitioners are health care professionals employed under the of a medical director in the therapy, management, rehabilitation, diagnostic evaluation, and care of patients with deficiencies and abnormalities which affect the pulmonary system and associated aspects of cardiopulmonary and other systems functions, and includes all of the following:  
(1) Direct and indirect pulmonary care services that are safe, aseptic, preventive, and restorative to the patient.  
(2) Direct and indirect respiratory care services, including, but not limited to, the administration of pharmacological and diagnostic and therapeutic agents related to respiratory care procedures necessary to implement a treatment, disease prevention, pulmonary rehabilitative, or diagnostic regimen **prescribed by a physician and surgeon.**  
(3) Observation and monitoring of signs and symptoms, general behavior, general physical response to respiratory care treatment and diagnostic testing and (A) determination of whether such signs, symptoms, reactions, behavior, or general response exhibits abnormal characteristics; (B) implementation based on observed abnormalities of appropriate reporting or referral or respiratory care protocols, or changes in treatment regimen,

### Advanced Practice RT

- Advanced Practice Respiratory Therapists are mid-level providers, similar to Physician Assistants and Nurse Practitioners, but only treat deficiencies and abnormalities which affect the pulmonary system and associated aspects of cardiopulmonary and other systems functions and includes all of the following:
  - (1) Direct and indirect respiratory care assessment prescription to provide treatment, including, but not limited to, the ordering of pharmacological and diagnostic and therapeutic agents related to respiratory care procedures necessary to implement a treatment, disease prevention, pulmonary rehabilitative, or diagnostic regimen.
  - (2) Assessment of signs and symptoms, general behavior, general physical response to respiratory care treatment and diagnostic testing and (A) determination of whether such signs, symptoms, reactions, behavior, or general response exhibits abnormal characteristics; (B) prescribing and implementing a plan based on observed abnormalities.
  - (3) Prescribing diagnostic and therapeutic interventions of any of the following: administration of medical gases, exclusive of general anesthesia; aerosols; humidification; environmental control systems and baromedical therapy; pharmacologic agents related to respiratory care procedures; mechanical or

<p><b>pursuant to a prescription by a physician and surgeon or the initiation of emergency procedures.</b></p> <p>(4) The diagnostic and therapeutic use of any of the following, <b>in accordance with the prescription of a physician and surgeon:</b> administration of medical gases, exclusive of general anesthesia; aerosols; humidification; environmental control systems and baromedical therapy; pharmacologic agents related to respiratory care procedures; mechanical or physiological ventilatory support; bronchopulmonary hygiene; cardiopulmonary resuscitation; maintenance of the natural airways; insertion without cutting tissues and maintenance of artificial airways; diagnostic and testing techniques required for implementation of respiratory care protocols; collection of specimens of blood; collection of specimens from the respiratory tract; analysis of blood gases and respiratory secretions.</p> <p>(5) The transcription and implementation of the <b>written and verbal orders of a physician and surgeon pertaining to the practice of respiratory care.</b></p>	<p>physiological ventilatory support; bronchopulmonary hygiene; cardiopulmonary resuscitation; maintenance of the natural airways; insertion without cutting tissues and maintenance of artificial airways; diagnostic and testing techniques required for implementation of respiratory care protocols; collection of specimens of blood; collection of specimens from the respiratory tract; analysis of blood gases and respiratory secretions.</p> <ul style="list-style-type: none"> <li>• Orders and interprets laboratory tests, imaging studies, and diagnostics and provides a diagnosis based on findings.</li> <li>• Prescribes pharmacological agents and therapies to treat the patient's acute and/or chronic cardiopulmonary abnormalities.</li> <li>• Practices and treats cardiopulmonary patients in acute emergency department or urgent care, critical care, sub-acute, in-patient, and preventative care, as well as operating rooms, chronic care, ambulatory, and out-patient care settings among others.</li> </ul>
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January 16, 2025

California Legislature

Members of the Legislature,

The Association of Pulmonary Advanced Practice Providers (APAPP) is the first association solely focused on Advanced Practice Providers (APPs) working in the realms of pulmonary medicine.

APAPP requests your support for creating the Advanced Practice Respiratory Therapist (APRT), which would help increase access to care for patients with COPD, asthma and other respiratory related health conditions.

Respiratory Care Practitioners are well suited for advanced practice in the cardiovascular pulmonary space. Creating an advanced practitioner who already specializes in the cardiopulmonary space extends the reach of the physician thereby increasing access to care for patients with respiratory conditions.

California has experienced an increase in the number of patients, and the care each patient requires, since COVID. Some report their patient backlog has tripled and wait times are often months. Some patients lose hope and simply continue to return to the emergency room.

California will need physician extenders to provide patient care coverage. Respiratory Care Practitioners should have access to the advanced education, training, and clinical practice needed to support the treatment of cardiopulmonary patients.

California has established high standards and a broad scope for Respiratory Care Practitioners, which makes it well situated to be on the forefront of this opportunity to create an advanced practitioner who specializes in respiratory care to reach more patients, more effectively.

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## ASSOCIATION OF PULMONARY ADVANCED PRACTICE PROVIDERS

It is for these reasons we request your support in creating the Advanced Practice Respiratory Therapist. Thank you for your consideration.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Corinne Young', with a stylized, flowing script.

Corinne Young, MSN, FNP-C, FCCP

Founder/President APAPP

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# Reintroducing the Advanced Practice Respiratory Therapist

Kevin O'Neil, MD, MHA, FCCP  
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Physician shortages,<sup>1,2</sup> worsened by the COVID pandemic,<sup>3</sup> continue to impact the US health care system. Although there is some uncertainty about staffing for pulmonary/critical care medicine,<sup>1</sup> significant shortfalls are predicted to continue for sleep medicine, pediatric pulmonary, and nonmedical critical care.<sup>2</sup> Increasingly, health systems and providers are using advanced practice practitioners (APPs: nurse practitioners or physician assistants) to minimize the impact of these shortages on patient care. Data are most robust for critical care. A recent study documented that almost three-fourths of US ICUs are staffed in part by APPs.<sup>4</sup> The studies also support improved quality, cost, and length of stay when APPs work as part of a collaborative team under the direction of a critical care physician.<sup>5</sup> Entry level APP programs vary widely, but most new graduates need a significant orientation, which can range from full 1-year “fellowships” to more limited “apprenticeship” programs, depending on the institution or practice environment.<sup>5</sup>

In this issue of *CHEST*, one of a trio of articles<sup>6-8</sup> reintroduces *CHEST* readership to the advanced practice respiratory therapist (APRT),<sup>9</sup> which is an APP focused on cardiopulmonary disease. In a recent “How I Do It” article, Varekojis et al<sup>6</sup> describe the development of the first APRT program at The Ohio State University. The program, which graduated its inaugural class in 2021, awards a Master of Respiratory Therapy degree. Leveraging the knowledge and expertise of a registered respiratory

therapist (RRT), the program adds extensive didactic instruction and a minimum 1,200 hours of clinical time supervised by physicians in both inpatient and outpatient settings. Both adult and pediatric tracks are offered. The competency domains, as outlined in the article and by the Commission on Accreditation for Respiratory Care (CoARC)<sup>10</sup> in the accreditation standards for APRT programs, mirror those of the Accreditation Council for Graduate Medical Education. APRT students are educated and work alongside other APP students under the supervision of a licensed physician. The article also gives practical examples of how an APRT could be incorporated into pulmonary and sleep practices.

Another article in this series by Shaw et al<sup>7</sup> published in the January issue of *CHEST* outlined the development of an assessment tool for graduates of APRT programs to be used as a standardized independent assessment of educational program outcomes. The process is robust and includes input from physicians, early graduates of the APRT program, and APPs actively working in pulmonary/sleep/critical care medicine. There was broad geographic and care setting representation, including pediatric and neonatal providers. Although the technical aspects of developing the assessment examination may be beyond the interest of much of the *CHEST* readership, the assessment content (Appendix A and Table 5) and patient types (Table 6) cover the full spectrum of practice environments and populations that will likely be encountered by an APP in the areas of pulmonary/sleep/critical care. Also reassuring is the emphasis on advanced cognitive skills (analysis and application) that make up most of the test. Potential employers should feel confident that APRT graduates who perform well on the assessment tool have the cognitive skills to care for the overwhelming majority of patients that they would encounter in clinical practice.

In the final article of the series, Whitt and Yarborough<sup>8</sup> will outline a vision for deploying the APRT in the Veteran Health Administration and detail their progress to date incorporating two APRTs into outpatient clinical care, including sleep, COPD, and smoking cessation clinics. Alternative care models that use respiratory therapists (RTs) as care coordinators have been described previously. Hang

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and Woodrum<sup>11</sup> outline a program in the Kaiser Permanente system that treats patients with chronic respiratory failure with the use of RTs as care coordinators with physician-driven care algorithms, technology, and close oversight. They also reference a Canadian trial that uses RTs in a similar role to treat patients with severe sleep disordered breathing with same-day sleep physician care review. The Veterans Administration model that is described differs in that the care management involves more complex patients and includes patients who need home ventilator support; the providers work without close/direct supervision and provide care to different patient populations in rotating clinics, which requires significantly greater knowledge and skill.

Advantages to the APRT begin with training focused primarily on the care of patients with cardiopulmonary disease that builds on an already solid foundation as an RRT. The APRT will provide value in all practice settings but will be especially useful caring for patients with complex cardiopulmonary issues. Also, unlike many nurse practitioner programs that focus on either the acute care (inpatient/emergency department setting) or primary/family care (outpatient setting), APRT training covers the whole health care spectrum. These advantages hopefully translate to shorter orientations and a more rapid transition to a fully functional team member. The APRT model also fully endorses a collaborative, team-based approach to health care delivery under the direction of a physician. Finally, the APRT supports maintaining RT expertise at the bedside. Clinically focused RTs currently have limited options and often transition to other specialties for career growth. APRT provides a clear clinical career pathway for motivated RTs and an example for junior staff.

Barriers to wider dissemination of the APRT include its novelty, licensing, and reimbursement. Currently, only one program exists, although several other institutions have expressed interest in starting programs (personal communication, CoARC). Surveys, both of physicians nationally<sup>12</sup> and of RTs in California,<sup>13</sup> support the need for APPs with a strong cardiopulmonary background<sup>12</sup> and the APRT in particular.<sup>13</sup> Licensing and reimbursement issues are more problematic. Licensing occurs at a state level and requires modification of individual state RT practice acts. Reimbursement is not an issue in the VA Medical Center or in capitated health systems where access, safety, and cost efficiencies will drive APRT uptake. It is a concern, however, in a

fee-for-service environment where lack of reimbursement, particularly at the governmental level, will hinder adoption. The American Association for Respiratory Care is addressing both potential barriers and providing seed money to educational institutions interested in starting APRT programs.<sup>14</sup>

As physicians, we can and should work with our RT colleagues to support APRT programs. Consider APRTs for APP positions in your practice/institutions. Support the establishment of new programs locally and, if possible, open your practice/facility to clinical rotations for APRT students. Encourage RRTs to consider the APRT as a career path. Finally, support licensure efforts locally and initiatives to allow reimbursement for APRT and RT care.

## Financial/Nonfinancial Disclosures

The authors have reported to *CHEST* the following: K. O. is the current Past President for CoARC and served as the Program referee for the initial CoARC certification for The Ohio State University APRT program. He also participated in the survey process for the APRT educational outcomes assessment tool described in the article by Shaw and coworkers but was not involved in the manuscript preparation or submission.

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# Advanced Practice Respiratory Therapists Expand the Scope of Practice

Jan 3, 2022 | [Education](#) |



*The nation's first APRT master's program at Ohio State University recently graduated its first group of licensed advanced practice respiratory therapists.*

By Phyllis Hanlon

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*Image: The first graduating class from OSU's Advanced Practice Respiratory Therapist program: (L-R) Back row: Scott Hazelwood, Courtney Thompson, Mindy Conklin, Andrew Shonk. Front row: Nicole Letcher, Tiffany Shook, Punam Shingala. Image courtesy Ohio State University.*

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When Courtney Thompson enrolled in her first year of college, she planned to become a teacher. However, fate would intervene and steer her in another direction. One of Thompson's grandmothers had COPD and the other, lung cancer. She witnessed first-hand the struggles these women endured but was inspired by a respiratory therapist who helped her grandmothers successfully manage their breathing difficulties.

That experience convinced her that helping people exactly the way the therapist had was the path she needed to follow.

Pursuing that path, Thompson graduated from Marshall University through St Mary's Center for Education with a bachelor's degree in respiratory therapy in 2015. She landed a job as a registered respiratory therapist (RRT) at the Ohio State Wexner Medical Center. Although she found the work satisfying, in time she felt that she wanted to do much more for the respiratory community and the profession. At the time, her only options were to enter a nurse practitioner or physician assistant program.

Fortunately, her timing was good, as the first advanced practice respiratory therapy (APRT) program had just launched at [Ohio State University—College of Medicine, School of Health and Rehabilitation Sciences](#).

## **Determining a Need for Advanced Practice Respiratory Therapists**

Program director Georgianna Sergakis, PhD, RRT, RCP, FAARC, reported that conversations around creating an advanced practice respiratory therapy program began in 2007. Physicians and other medical specialists, including pulmonologists, critical care physicians, sleep specialists and managers from a range of departments, provided input. Having encountered motivated students who sought clinical autonomy but with no advancement opportunities currently in the field, they unanimously agreed that additional educational opportunities for registered respiratory therapists (RRTs) were needed.

The committee conducted a needs assessment in Ohio in 2012 and also polled graduates from the baccalaureate program to gauge their interest in an advanced program. The results confirmed that there were good reasons to create such a program. The committee drafted a degree proposal, which was filed in 2014 and published in Respiratory Care Annual. "The Ohio needs assessment was important for our program," said Sarah M. Varekojis, PhD, RRT, RRT-ACCS, FAARC, Associate Professor and Director of Clinical Education, Respiratory Therapy, OSU—College of Medicine, School of Health and Rehabilitation Sciences. "We had to show that our program was meeting a need in Ohio."

Additionally, the American Association for Respiratory Care (AARC) served as a third-party sponsor for a national needs assessment, the results of which were published in Respiratory Care in 2019. Another educational national publication also published the needs assessment results. "Both of these assessments served an important role," Varekojis said.



# **Advanced Practice Respiratory Therapist Program Requirements**

When designing the program, the committee had to comply with educational standards set by the Commission on Accreditation for Respiratory Care (CoARC). Varekojis pointed out that CoARC mandates certain requirements although individual programs can issue their own specific conditions. First, the student has to be a graduate of a CoARC approved institution. “You have to have a bachelor’s degree or you could also have a baccalaureate,” she said. “Our program at OSU is a master’s level program.” The student also has to have at least one year of work experience as an RRT and be licensed to practice in the state where the program is located.

CoARC initially adopted the standards for OSU’s APRT program in 2015; they were also endorsed by the AARC, the American College of Chest Physicians, the American Thoracic Society and are supported by the American Society of Anesthesiologists.

## **Curriculum**

The APRT curriculum comprises 47 credit hours in a five-course semester. Students begin studies in the fall and graduate in the spring, according to Varekojis. During the first year, students take foundational courses that include advanced health assessment, pathophysiology of altered health states, advanced pharmacology in nursing, ethical issues in advanced practice and advanced practice in respiratory care. The students also take evidence-based practice courses with the physical therapy department. Varekojis pointed out that the APRT students take some courses with nurse practitioner students as well.

In addition to the didactic component, students are required to complete 1,000 hours of supervised practice by a licensed physician in a clinical specialty, which might take place in adult critical/emergent care, pediatric or neonatal critical care, pediatrics, primary respiratory care, neuromuscular respiratory care and sleep disorders.

Advanced courses are applied in both inpatient and outpatient settings and reenforce the principles of the foundational courses. “At the time of admission to the program, the student indicates their interest in a specific area of practice,” Varekojis said. “OSU has everything a large urban hospital has: multiple inpatient care areas, an outpatient clinic, specialty clinics, a sleep clinic and general pulmonary. There are a lot of different clinical opportunities for students.”

Students who decide to focus on sleep medicine can explore this discipline in the sleep clinic where they learn more about a variety of sleep disorders. Those interested in pediatrics have clinical opportunities at Nationwide Children’s Hospital, which is affiliated with the OSU College of Medicine. Physicians comprise the faculty and students are exposed to the same opportunities that are available in the adult setting; these might include rotations in the ICU and NICU.



## **Professional Collaboration**

Jessica Schweller, APRN, CNP, sleep nurse practitioner in the Ohio State Sleep Disorders Clinic, began her medical career as an RRT. After she graduated from the RT program in 2004, she wanted to expand her scope of practice. At the time, such opportunities did not exist for RTs so she entered a nurse practitioner (NP) program. She currently works as a sleep NP in the internal medicine department at OSU but now has the opportunity to work with APRT students during their sleep medicine rotation. “I help students get to my level of practice. In a clinical environment they are one-on-one, right there seeing patients individually, reporting back what they find, creating a plan and determining a diagnosis,” she said.

Schweller added, “Students have an opportunity to see what I do and it helps the decision as to where they want to work. They do some procedures while being supervised and will have more autonomy in decision-making,”

Students also work with other clinical professionals, including pharmacists, ICU nurses and others who can help guide their decisions regarding their future. Students observe first-hand what these clinical professionals can do and are encouraged to think about what they can do for a variety of departments in a clinical setting, Schweller said.

## **Advanced Practice Respiratory Therapist Capstone Projects**

Students begin thinking about a topic for their capstone project, which is performed in a clinical setting at an academic medical center affiliated with OSU, in their first year and finalize it at the beginning of their second year, according to Sergakis. “They identify a clinical problem, do a systematic review of the literature, write and synthesize the information and finally create an implementation plan for an evidence-based synthesis. [These projects] highlight the value-added of an APRT,” she said.

As an example, one student examined the value of non-invasive mechanical ventilation for a subgroup of patients as a bridge after intubation to prevent reintubation. The student created an algorithm after reviewing the literature and creating a clinical practice.

Currently, several students are investigating how best to diagnose in the management and prevention of readmission or transitioning to other health care settings, Sergakis added.

## **Expanding the Role of the RT**

OSU graduated its first class of seven students in May 2021. Following graduation, the students are actively pursuing clinical advancement for APRTs while continuing to work as RRTs, according to Varekojis. “They are having discussions with their employers. Once legislation passes they can become licensed,” she said. “Legislative language has been presented and a legislative draft has been created. Lobbyists are seeking legislator sponsors to introduce the bill.”

Varekojis emphasized that an advanced degree in respiratory therapy differs significantly from the one an RRT obtains. “This new profession is completely separate in scope of practice. They are focused on patient management, diagnostic management and therapeutic management,” she said. The difference between the role of the RRT and the APRT can be compared to the scope of practice between an RN and an NP.

“The RRT provides bedside treatment and intervention to treat a problem. There is a lot they can do: intubate, ECMO, etcetera,” said Varekojis. “The APRT can do decision-making, assessment, determine a diagnosis, write a plan for the RRT who might implement it. They have a goal to play an expanded role in the care of patients.”

Schweller explained the difference between the two roles by noting that the RRT “delivers the treatment he or she is told to do,” while the APRT does “assessment, managing and prescribing.” She noted that making this distinction has made students more aware of the purpose and goals of the program.

## **Ideal Career Advancement Vehicle**

The launch of the APRT program provided a reason to remain in the profession and offered Courtney Thompson a new professional avenue. She entered the program in the fall of 2019 with high expectations and was not disappointed.

According to Thompson, the APRT program at OSU is the leading career advancement vehicle that respiratory therapists have been waiting for. “I have seen so many amazing RTs go into another type of advanced practice provider [discipline], but to do that they must leave respiratory therapy. This [program] will keep that from happening and will allow amazing RTs to advance and use the skills we have but more in a cardiopulmonary way like the APRT program,” she said.

Thompson found that building relationships with other respiratory care professionals, particularly the pulmonary physicians, was a very important and useful aspect of the program. “We did our clinicals with attendings and I honestly learned so much from them,” she said. “Since graduating, that learning has not stopped because now, as an RT still at the bedside, they are still aware of what I went to school for and do not hesitate to still create a learning environment for me.”

Thompson added that during the program the students took classes with nurse practitioner students, which was mutually beneficial as it helped to build a bond between the two groups. “[That experience] let them see us as a profession since we will ultimately be working with them when we get into jobs,” she said.

As she continues to work at OSU’s Wexner Medical Center, Thompson is unsure of which respiratory discipline she will pursue. During her clinical practice, she worked in medical ICU, surgical ICU, sleep medicine clinics, interventional pulmonology clinics and pulmonary clinics. “After going through clinicals in multiple different areas, I would love to be a sleep medicine

APRT. I really enjoyed helping those with sleeping disorders and difficulties in the outpatient setting,” she said.

The Association of American Medical Colleges predicts that the country will experience a shortage of approximately 140,000 physicians by 2033. The COVID-19 pandemic has raised awareness of the importance of collaboration among medical professionals, particularly with respiratory care specialists.

At the same time, the Bureau of Labor Statistics (BLS) reports that employment of RTs is projected to grow 23% from 2020 to 2030, much faster than the average for all other occupations. The opportunity to earn an advanced degree in the profession through an APRT program will help to alleviate the shortage of respiratory specialists as it prepares RRTs to assume more clinical responsibility, especially in the cardiopulmonary realm.

Sergakis emphasized that OSU is excited to see the Advanced Practice Respiratory Therapists program grow nationally. “We are speaking with the directors throughout the country. We want to see more programs like this and some are in the works,” she said. “Some states are actively working on educational and employment opportunities and licensure. We do not want to be the only program.”

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