

# Perspectives of Respiratory Therapy Program Directors Regarding Degree Advancement Initiatives Amidst Workforce Shortages in the United States

Sandra K. Collins, PhD, Richard C. McKinnies, PhD, Kellie D. Whittington, PhD, Stacey McKinney, MEd, Thomas Shaw, MBA, PhD, Jessica Cataldo, PhD

Southern Illinois University Carbondale  
Carbondale, Illinois 62901

*Abstract: COVID-19 previously brought well-publicized attention to the shortage of ventilators. Not as widely reported was the significant shortage for respiratory therapists who specialize in ventilator treatment. Training for these health care professionals is initiated in academic programs specializing in respiratory therapy. However, new accreditation initiatives may change the academic landscape through the escalation of degree requirements making bachelor-level preparation the entry-level expectation. A survey was sent to respiratory therapy program directors in academic institutions within the United States to measure the perceptions regarding degree advancement initiatives and workforce impact. A total of 425 surveys were distributed with 112 responses. Publicly available data on current workforce shortages were analyzed to supplement survey data. Descriptive statistics were calculated for quantitative data, while qualitative survey data were analyzed using thematic analysis. A summary of key findings of the study include the pandemic increased the focus on respiratory therapists and their role importance; there are but a mere scattering of respiratory therapy programs in the United States that currently offer a degree at or above an associate's degree; and program directors from respiratory therapy programs in the United States largely perceive degree advancement initiatives as a positive development. However, they also expressed concern that these initiatives might worsen the already evident workforce shortages of respiratory therapists.*

**Keywords—** COVID-19, respiratory therapists, ventilator treatment

## 1. INTRODUCTION

COVID-19 has emerged as one of the greatest population health and economic challenges known to us since World War II.<sup>1</sup> This has resulted in focused attention being placed on the field of respiratory therapy since the treatment of COVID-19 often requires the assistance of respiratory therapists who have been specifically trained to work with conditions, like COVID-19, that effect breathing and/or cardiopulmonary function. There are multiple respiratory therapy programs in academic settings in the United States (U.S.) which academically prepare students to become eligible for respiratory therapy licensure.<sup>2</sup> However, a workforce shortage of respiratory therapists already exists<sup>3</sup> and is poised to increase due to circumstances such as the ongoing fight against COVID-19<sup>4</sup> and the continued increase of chronic respiratory illnesses (COPD).<sup>5</sup> Along with these challenges, there is also an initiative to increase the degree requirements from an associate's degree to a bachelor's level for entry-level respiratory therapists by 2030.<sup>6</sup>

Effective January 1, 2018, all new academic respiratory therapy programs seeking accreditation must offer a minimum of a bachelor's degree. Although there is no specific mention regarding the continuation of current certificate programs, those offering an associate degree will be allowed to continue to do so as long as they remain accredited.<sup>7</sup> New mandates will also require a

minimum of a bachelor's degree for all respiratory therapists entering practice by 2030, along with the National Board for Respiratory Care's (NBRC) Registered Respiratory Therapist (RRT) credential. Therefore, current associate-level programs have some time given the 2018 mandates are focused on new respiratory therapy academic programs seeking accreditation, but the changes are expected to intensify by 2030. At that time the expectation will be that all new respiratory therapists entering practice will be required to hold a bachelor's degree. This clearly places the focus on the academic preparation of respiratory therapy graduates and this is likely to dramatically impact existing associate-level respiratory therapy programs.<sup>6</sup>

Degree advancement is a strategy that other healthcare professions have successfully implemented.<sup>8,9,10</sup> Yet, the landscape of respiratory therapy may be slightly different than other professions given the number of academic programs the aforementioned changes may impact<sup>11</sup> and the urgency for skilled and workforce-ready respiratory therapists.<sup>12</sup>

## Problem Statement

COVID-19 has brought well-publicized attention to the shortage of ventilators. Not as widely reported is the significant workforce shortage that already exists for respiratory therapists who specialize in ventilator

treatment. Training for these healthcare professionals is initiated in academic programs specializing in respiratory therapy. However, new respiratory therapy accreditation initiatives in the U.S. may change the academic landscape through the escalation of degree requirements making bachelor-level preparation the entry-level expectation. There is concern that these accreditation modifications could further reduce the number of eligible and workforce-ready respiratory therapist in a time where COVID-19 has made them especially needed.

**Purpose Statement**

Based on the problem statement, this study intends to examine the perception of respiratory therapy leaders in academic settings within the U.S. regarding degree advancement initiatives and if they perceive the academic mandates to increase the workforce shortages of respiratory therapists. This study may provide respiratory therapy educators, healthcare professionals, and health care administrators with the ability to project workforce needs and plan both accordingly and competitively for the recruitment and retention of respiratory therapists.

**Research Question**

How do program directors of respiratory therapy programs in U.S. academic institutions perceive the pending degree advancement initiatives of respiratory therapists in terms of workforce impact?

**Methodology and Population**

To evaluate the perceptions of respiratory therapy program directors regarding degree advancement initiatives and workforce impact, if any, a survey was developed to collect both quantitative and qualitative data. Once the study was reviewed and approved by the research institution’s human subjects committee, participants were recruited by obtaining their name and email address from a publicly accessible website which lists program directors from accredited respiratory therapy programs in academic settings in the U.S. Participants were emailed a cover letter explaining participation was voluntary. It also contained a consent statement and a SurveyMonkey link that participants could follow to anonymously access the survey. No personal information was gathered that could be used to identify contributors. The study population received the invitation to participate two times in the span of two weeks. Overall, 434 potential participants were emailed, nine emails were returned as undeliverable or requested to be removed from the study, which resulted in 425 surveys distributed. A total of 112 respondents participated in the study which resulted in a 26% response rate. In addition to the survey, researchers conducted an extensive literature review on educational accreditation and degree advancement initiatives in the healthcare industry. Furthermore, current workforce

shortages were analyzed through publicly accessible, government websites.

The open-ended comments received from the survey were analyzed utilizing Braun and Clarke’s (2006) steps for conducting thematic analysis.<sup>13</sup> Two researchers independently coded the comments then compared codes to identify emerging themes. Initially, comments were categorized based on those who supported the change and those who opposed the change. The two researchers identified eight initial themes between the two categories. The themes were then shared with the rest of the research team to corroborate identified themes as well as further refine themes. A final number of five themes were identified by the research team.

**2. RESULTS**

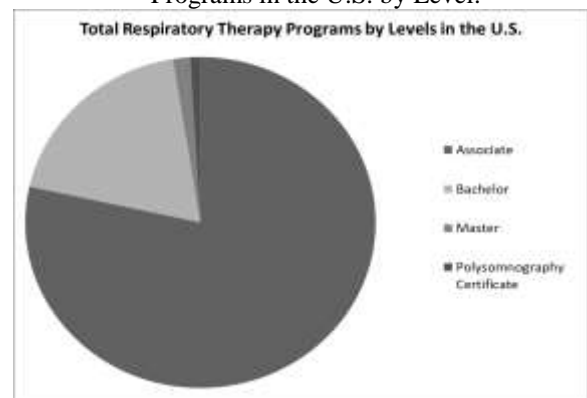
**Demographics of Program Directors**

The participant demographics were categorized by gender, ethnicity, age, and faculty position. Results indicated program directors of accredited respiratory therapy programs in the U.S. are most frequently female (60%) and Caucasian (74%). Ages were split into groups which resulted in the following categories of years of age: 71-80 (9%); 61-70 (25%); 51-60 (35%); 41-50 (20%); 31-40 (11%). Most program directors reported they hold a 12-month contract (55%) and a non-tenure track (48%) or tenured/tenure track (45%) position in their academic institution.

**Demographics of Participant Respiratory Therapy Programs**

Of those who responded to the survey, 76% were from associate-level respiratory therapy programs; 21% from bachelors; 2% from masters, and 1% from certificate programs. Survey participation by program level was reflective of the distribution of accredited respiratory therapy programs by program level across the U.S, as shown by Figure 1: 78% associates; 19% bachelors; 2% masters; and 1% certificate.<sup>11</sup>

Figure 1 – Total Accredited Respiratory Therapy Programs in the U.S. by Level.



Data retrieved from: Find an Accredited Program - CoARC - Commission on Accreditation for Respiratory Care.

### Perceptions Regarding Degree Advancement and Future Intent

When asked, 67% of study participants felt degree advancement initiatives would have a positive impact on the field of respiratory therapy. They also responded that the changes would have a positive impact on the workforce availability of respiratory therapist, but only by a narrow margin (51% positive impact; 49% negative impact). When asked if the program director's institution intended to transition their current respiratory therapy program to a bachelor's degree or higher, 12% said yes; 40% said no; and 19% said they were undecided (29% were already at a bachelor's degree or higher). Of those who plan to transition to a higher degree, 26% stated they would transition to a bachelor's degree, 8% were undecided, and 0% stated a master's degree (27% already offered a bachelor's degree or higher and 39% stated they will not transition to a higher degree). As Figure 1 also demonstrates, a staggering percentage of the total respiratory therapy programs in the U.S. are at an associate-level.<sup>11</sup> This puts them in position where they must consider significant changes if they want to meet 2030 expected accreditation mandates.<sup>6</sup>

Inasmuch as survey participants revealed concerns about workforce availability, two key themes emerged from respondents who supported degree advancement initiatives of the accrediting body for academic programs in respiratory therapy. The first theme identified was the furtherance of the profession, enhancing the status and recognition of respiratory therapists as part of the healthcare team. One respondent stated, "The move to BS entry will assist the profession in being recognized as professionals by the DOL [Department of Labor] and CMS [Centers for Medicare and Medicaid Services]. The designation will allow for expansion of our practice." Another wrote, "For respiratory therapists to achieve the level of the professional respect, we must continue to increase our level of education." The second theme identified was that a baccalaureate degree better correlated with the workload required to become a respiratory therapist. One program director stated, "Our students were taking almost four years of school just to receive an AAS."

Among respondents who opposed the degree advancement changes, three key themes were identified. The first theme centered on speculation that a BS degree enhances the quality and skill of the respiratory therapist. One program director noted, "In a bachelor's degree how much more respiratory education are students receiving. How many additional classes do they take that are not respiratory? Taking additional classes that are NOT respiratory classes does not make a better therapist." The second theme identified was that workforce demands

warrant maintaining AS with the option to advance to BS, similar to LPN/RN. One respondent writes, "I feel that in rural areas that already have trouble finding therapists, will find it increasingly more difficult to find therapists for their facilities." The final theme recognized the limitations of community colleges to move to a bachelor's degree, both due to state law which prohibits such, and to the lack of guidance from accrediting bodies and administration. One respondent stated, "The foundation must be in place for states to provide this training. Coming from a state that has no bachelor's programs, no ability for community colleges to offer these programs, there is a major problem for us in making this happen." Another respondent noted that this move may limit educational access, stating, "Unfortunately, eliminating AS programs does limit access to education."

### 3. DISCUSSION

Educational accreditation is an essential part of almost all legitimate healthcare specialties. Oversight by accrediting bodies provides assurance that established standards, as defined by the individual and respective profession, are met and that the needs of the medical community and patients can be achieved by the academic programs' graduates. The accreditation agency for respiratory therapy programs reportedly reviews their standards every five years. The review is conducted by a variety of stakeholders with the intent to ensure accredited academic programs are providing a quality education which academically and clinically prepares graduates effectively. The move towards academic preparation at the bachelor's level came from the ongoing assessment activities of the accreditation standards. Stakeholders stated associate-level programs were significantly challenged in their pursuit to meet all the curriculum needs required for accreditation given they are often restricted to the number of credit hours they can require of students. Therefore, the most feasible avenue to assure curriculum mandates were met was to increase the degree level required whereas credit hours could be increased to cover all relevant core competencies. The degree earned would then be more commensurate with the effort expended.<sup>14</sup>

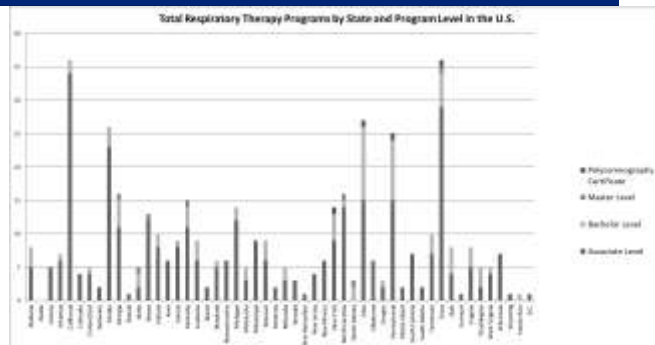
The field of respiratory therapy is not the first to undergo degree advancement as doing so is seemingly perceived to be a natural progression rising from the changes in higher education, accreditation, and an evolving healthcare system. Athletic trainers<sup>8</sup>, pharmacists<sup>9</sup>, and audiologist<sup>10</sup>, are just a few healthcare professions that have already been through degree advancement initiatives. Decisions to elevate a profession towards a higher level degree requires significant and realistic conversations, in-depth analysis, and structured planning while carefully considering the dynamic nature of healthcare and the nature of patient care settings.<sup>14</sup> As asserted by the Association of Schools of Allied Health Professions (ASAHP) taskforce, the

need for a diverse population of healthcare providers will be necessary to positively impact the delivery of patient care in both the non-acute and acute care settings. Utilizing a broad team of healthcare professionals will assist in meeting these needs, thus positively impacting the patient experience and value-based care delivery.<sup>15</sup> Per PricewaterhouseCooper, as cited by McLaughlin et al., when care is rendered via this myriad of specialties approach, health and wellness is enhanced, with each team members playing a different, specialized role.<sup>15</sup> The shift towards enhancing educational requirements came in when concerns surfaced, questioning the readiness of the existing health care teams to effectively render care to a changing paradigm.<sup>16</sup> To best meet the dynamic needs of increasingly complex patients, effectively manage co-morbidities, utilize data effectively, and promote health of the nation in non-traditional measures, advancements in education became the norm. Findings from the Josiah Macy Jr. Foundation asserted the need for lengthening coursework to include competencies healthcare professionals need in order to safely and effectively provide care.<sup>17</sup>

Pertaining to workforce issues in respiratory therapy, a review of the information provided by the Bureau of Labor Statistics through the Department of Labor indicates the field of respiratory therapy is poised for tremendous growth with a projected 23% increase. This characterizes respiratory therapy as a field that is expected to grow “much faster than average”.<sup>3</sup> Even when this current pandemic crisis has ended, the shortage of respiratory therapists will likely still be significant due to other respiratory issues<sup>18</sup> such as chronic lower respiratory illnesses which are the fourth leading cause of U.S. deaths, including COPD.<sup>5</sup>

Figure 2 provides an overview of the distribution of respiratory therapy programs across the U.S. by state and level. This demonstrates that currently, some states only hold associate-level respiratory therapy programs<sup>11</sup> which fuels concerns regarding the availability of academically prepared respiratory therapists, even if just a portion of their associate programs do not transition to higher degree offerings.

Figure 2 – Total Accredited Respiratory Therapy Programs in the U.S. by Level and State



Data retrieved from:

[https://www.coarc.com/Students/Find-an-Accredited-Program/Print-](https://www.coarc.com/Students/Find-an-Accredited-Program/Print-Accredited-Programs.aspx)

[Accredited-Programs.aspx](https://www.coarc.com/Students/Find-an-Accredited-Program/Print-Accredited-Programs.aspx). Accessed on 5/4/2020.

Overall, support was observed amongst program directors of respiratory therapy programs regarding 2030 degree advancement initiatives which outline the expectation that entry-level respiratory therapists hold a bachelor's degree or higher. However, the workforce concerns are also evident and this has likely increased due to COVID-19 considering 87% of survey participants stated COVID-19 increased the visibility regarding the need for respiratory therapists. As the pandemic engulfed hospitals and patient care providers, the role of respiratory therapists in the treatment of COVID-19 was thrust into the spotlight given their unique training and knowledge.<sup>18</sup>

#### 4. Conclusion

Respiratory therapists sit among the top of the list of healthcare professions in terms of workforce shortages.<sup>3</sup> COVID-19 brought forth awareness of respiratory therapists at a time when new accreditation mandates regarding degree advancement are beginning to roll out.<sup>6</sup> Literature review shows educational accreditation and degree advancement initiatives both offer rewards and challenges to academic institutions who offer respiratory therapy programs.<sup>6,17</sup> Although program directors of respiratory therapy programs in U.S. academic institutions largely support the degree advancement initiatives for the field of respiratory therapy, some do not plan to transition their programs toward higher degree offerings. Even though most program directors felt new accreditation expectations would not result in a negative impact on the available workforce of respiratory therapists, almost half of the respondents revealed their concern that the mandates may cause workforce shortages to intensify if there are not ample academic respiratory therapy programs across the U.S. that can fill the need of qualified respiratory therapy professionals.

#### References

1. Coote D. (2020, April 1). U.N.: COVID-19 is 'greatest test' since World War II. World News. Retrieved on May 12, 2020 from

1. [https://www.upi.com/Top\\_News/World-News/2020/04/01/UN-COVID-19-is-greatest-test-since-World-War-II/9631585722662/](https://www.upi.com/Top_News/World-News/2020/04/01/UN-COVID-19-is-greatest-test-since-World-War-II/9631585722662/).
2. CoARC. (n.d.). Retrieved May 4, 2020, from <https://www.coarc.com/About.aspx>.
3. Respiratory Therapists: Occupational Outlook Handbook. Retrieved October 25, 2021 from Respiratory Therapists : Occupational Outlook Handbook: : U.S. Bureau of Labor Statistics (bls.gov).
4. Sandler R. (2020). The coronavirus will return in the fall, Fauci predicts, but the U.S. will be better prepared. Forbes. Retrieved May 12, 2020 from <https://www.forbes.com/sites/rachelsandler/2020/03/30/the-coronavirus-will-return-in-the-fall-fauci-predicts-but-the-us-will-be-better-prepared/#4e786f5ee39b>
5. Leading Causes of Death. (2017, March 17). Retrieved May 6, 2020, from <https://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm>
6. Entry to Respiratory Therapy Practice 2030. (2019). Retrieved May 4, 2020, from <https://www.aarc.org/wp-content/uploads/2019/09/issue-paper-entry-to-respiratory-therapy-practice-2030.pdf>
7. Accreditation Standards for Entry into Respiratory Care Professional Practice. (2019, December 13). Retrieved May 4, 2020, from [https://www.coarc.com/getattachment/Accreditation/Entry-into-Practice-Standards/CoARC-Entry-Standards-1--2018-\(updated-12-19\)-\(3\).pdf.aspx?lang=en-US](https://www.coarc.com/getattachment/Accreditation/Entry-into-Practice-Standards/CoARC-Entry-Standards-1--2018-(updated-12-19)-(3).pdf.aspx?lang=en-US)
8. Best Medical Degrees: About. (2020). Retrieved from <https://www.bestmedicaldegrees.com/about/>
9. Strategic Alliance Degree Statement. (2015, May 20). Retrieved from, <https://www.atstrategicalliance.org/strategic-alliance-degree-statement>
10. McCabe, A. (2011, December 16). Pharmacists Education: B.S.Pharm to Pharm.D. - the Evolution of a Profession. Retrieved May 5, 2020 from <https://edtheory.blogspot.com/2011/12/pharmacists-education-bspharm-to-pharmd.html>
11. Certification Standards for Audiology Frequently Asked Questions: Implementation Date and Degree/Accreditation Requirement. (2020). Retrieved May 7, 2020, from <https://www.asha.org/Certification/Certification-Standards-for-Aud--Implementation-and-Degree/>
12. Commission on Accreditation for Respiratory Care - Accredited Programs. (n.d.). Retrieved May 4, 2020, from <https://www.coarc.com/Students/Find-an-Accredited-Program/Print-Accredited-Programs.aspx>
13. Halpern, N., Tan K. S. (2020, March 19). United States Resource Availability for COVID-19. Retrieved May 6, 2020, from <https://sccm.org/Blog/March-2020/United-States-Resource-Availability-for-COVID-19>.
14. Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
15. What is CoARC and how is it advancing RT educational levels? (2017, September 27). Retrieved May 4, 2020 from <https://www.aarc.org/coarc-advancing-rt-education/>
16. McLaughlin, R., Anderson, R., Ayzenberg, R., Cameron, J., Keahey, K., O'Brien, C., Romig, B., Sample, J., Simonian, Y., Tynsky, T., Wallace, B., Weinstein, M., Westervelt, S., & O'Sullivan-Maillet, J., (2018). Clinical education in transition: Recommendations and strategies from the clinical education task force of the Association of Schools of Allied Health Professions. Retrieved May 6, 2020, from <https://www.asahp.org>
17. Institute of Medicine (2003). Who will keep the public healthy? Educating Public Health Professionals for the 21<sup>st</sup> Century. Washington, DC: The National Academies Press. Retrieved May 6, 2020 from <https://nap.edu/catalog/10542/who-will-keep-the-public-healthy-educating-public-health>
18. Irby, D. (2018). Improving environments for learning in the health professions. Conference proceedings from the Josiah Macy Jr. Foundation. Retrieved on May 6, 2020, from [http://macyfoundation.org/assets/reports/publications/macy\\_monograph\\_2018\\_webfile.pdf](http://macyfoundation.org/assets/reports/publications/macy_monograph_2018_webfile.pdf)
19. Brady Scott, J. (2020, April 1). Even after the coronavirus pandemic, America can't breathe easy. USNews. Retrieved May 6, 2020, from <https://www.usnews.com/news/healthiest-communities/articles/2020-04-01/coronavirus-pandemic-exposes-need-for-respiratory-therapists>.