

Career Entry Pathways and Academic Progression in Respiratory Care Education

Commission on Accreditation for Respiratory Care



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INTRODUCTION

During the past decade new and innovative pathways to formally educate respiratory care professionals for an increasingly complex and challenging healthcare environment have emerged. The respiratory care profession continues to offer multiple ways for students to enter the profession and has consistently advocated for creative and innovative opportunities for academic progression that meet the needs of a student population that is diverse along numerous dimensions. The purpose of this report is to inform the CoARC Board and other key stakeholders in the respiratory care profession of the current and emerging pathways available to enter the respiratory care profession and the wide-ranging pathways available for practitioners to achieve advanced educational preparation within the respiratory care profession. A discussion of the political, social, and economic factors that have influenced the growth of the profession and the development of respiratory care education is beyond the scope of this report. First, a description of pathways for entry into the profession will be provided. A conceptual definition of post-professional programs will then be discussed. This will be followed by a review of the different types of post-professional pathways available. A discussion of an emerging pathway is also described. The report concludes with some final comments to stimulate future dialogue on this topic.

PATHWAYS FOR ENTRY INTO RESPIRATORY CARE PRACTICE

CoARC defines a first-professional degree program as “an educational program designed to provide students who possess no prior competence in respiratory care, with the knowledge and clinical skills required to function competently as a registry-eligible respiratory therapist”

- CoARC, 2010, p. 53

The Commission on Accreditation for Respiratory Care (CoARC) accredits first-professional respiratory care degree programs at the associate, baccalaureate, and master’s degree level in the United States and internationally. A key component of CoARC’s mission is to ensure that respiratory care education programs successfully prepare students for entry into the profession. CoARC defines a first-professional degree program as “*an educational program designed to provide students who possess no prior competence in respiratory care, with the knowledge and clinical skills required to function competently as a registry-eligible respiratory therapist*” (CoARC, 2010, p. 53). This definition, first published in November 2009, was adapted from the National Center for Education Statistics (NCES) definition that a first-professional degree is “...conferred upon completion of a program providing the knowledge and skills for the recognition, credential, or license required for professional practice” (NCES, 2006). Programs accredited by the CoARC are located in institutions which are accredited by a regional or national accrediting agency that is recognized by the U.S. Department of Education (USDE) and authorized under applicable law or other acceptable authority to award graduates of the program an associate or

higher degree at the completion of the program (CoARC, 2010, p. 12). The minimum degree requirement for entry into the profession has, since the adoption of the *Standards and Guidelines for the Profession of Respiratory Care* in 2000, been the associate degree. This minimum degree requirement for first-professional degree programs is consistent with the American Association for Respiratory Care’s (AARC’s) position statement on *Respiratory Therapist Education* first published in 1998 and revised later in 2009 (AARC, 2009). The primary goal of every first-professional degree program, regardless of degree conferred, is “*to prepare graduates with demonstrated competence in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains of respiratory care practice as performed by registered respiratory therapists (RRTs)*” (CoARC, 2010, p. 19).

Conferral of the first-professional degree requires completion of a program that meets all of the following criteria: completion of the academic prerequisites to become a registry-eligible respiratory therapist; requires at least two years of college-level study upon completion of the program; and is awarded after a period of study such that the total registered time to the degree, including both pre-professional and professional study, is equivalent to the acceptable level required of an associate’s degree. A first-professional degree program must adhere to the CoARC Accreditation Standards for the Profession of Respiratory Care. A first professional degree in respiratory care is generally required by law or custom to practice the profession (CoARC, 2012, p. 53).

Graduates of first-professional degree programs have the opportunity to earn both the Certified Respiratory Therapist (CRT) and Registered Respiratory Therapist (RRT) credentials through the National Board for Respiratory Care (see *Figure 1*). The Entry-Level Certified Respiratory Therapist (CRT) Examination administered by the National Board for Respiratory Care (NBRC) is designed to objectively measure essential knowledge, skills, and abilities (i.e., competencies) required of entry-level respiratory therapists. Individuals holding the CRT credential are eligible to practice respiratory care as defined by their state’s practice act, provided they meet other requirements to obtain a state license.

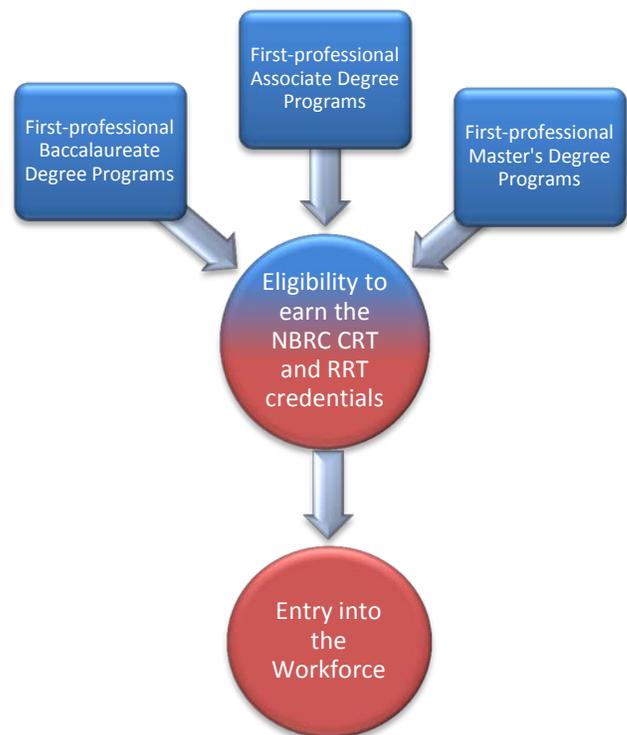
The Registered Respiratory Therapist (RRT) Examination administered by the National Board for Respiratory Care (NBRC) is designed to objectively measure essential knowledge, skills, and abilities required of advanced respiratory therapists (NBRC, 2012, p. 3). Currently, this credential is not required by any state to enter practice. Graduates of CoARC-accredited programs can choose to forego the RRT examination after earning the CRT credential.

Keep in mind that while the time frames described in the following sections are considered representative and are predicated on full-time status and credit load, extended time frames for part-time students and other creative degree completion or advancement models (e.g., “accelerated” programs) make it difficult to provide an inclusive description of entry and academic progression pathways in the context of time (e.g., a “2+2” program or “three-year track”).

Associate Degree Entry

Graduation from a typical first-professional associate degree program involves completion of approximately two academic years of instruction in which both the general education and other degree requirements are completed prior to or concurrently with required respiratory care didactic, laboratory and clinical coursework. CoARC publishes data each year on the number and types of first-professional degree programs. As of December 31, 2011, there were a total of 444 respiratory care programs and satellites. Of these, 384 (87%) offered the associate degree upon graduation. The Associate of Science (AS) degree is the most common degree conferred to graduates entering into respiratory care practice, accounting for 58% of all degree types awarded in 2011. This was followed by the Associate in Applied Science (AAS) degree. Other degrees include the Associate in Specialized Technology (AST) and Associate in Occupational Studies (AOS) which are conferred by several

Figure 1 – Entry Pathways into Respiratory Care Practice



institutions in Pennsylvania and California, respectively (CoARC, 2011, pp. 7-9). As of December 31, 2011, the majority of first-professional associate degrees (65%) were conferred by community college or junior colleges. This is followed by technical or vocational schools (19%), four-year colleges or universities (13%), career/technical colleges (2%), academic health sciences centers/medical centers (0.5%), and the U.S. military (0.5%).

Baccalaureate Degree Entry

Graduation from most first-professional baccalaureate degree programs -requires completion of approximately two academic years of pre-professional coursework (i.e., general education requirements, program pre-requisites, and other program admission requirements) followed by approximately two academic years of required didactic, laboratory and clinical coursework (i.e., the professional phase.) Typically, most or all program prerequisites must be taken prior to entry into the first year of the professional program. However, there are a small number of first-professional baccalaureate degree programs that require approximately 1 year (or less) in the pre-professional phase and 3 (or more) years in the professional phase. For these programs, some general education and other degree requirements are completed concurrently during the professional phase. Some first-professional baccalaureate degree programs offer what is called a “2+2” pathway which is designed to allow students to successfully pursue a bachelor’s degree by first attending a two-year institution (generally, a community college) before transferring to the first-professional baccalaureate degree program. This 2+2 pathway should not be confused with baccalaureate degree programs that provide degree advancement opportunities to graduates of first-professional associate degree programs. Degree advancement pathways are described later in this report.

As of December 31, 2011, there were a total of 444 respiratory care programs and satellites. Of these, 49 (11%) offered the baccalaureate degree upon graduation. The Bachelor of Science (BS) degree is the only baccalaureate degree conferred to graduates of first-professional baccalaureate degree programs, according to recent data collected by CoARC. As of December 31, 2011, the majority of first-professional baccalaureate degrees (82%) were conferred by four-year colleges or universities followed by academic health sciences centers/medical centers at 18% (CoARC, 2011, pp. 7-9).

Master’s Degree Entry

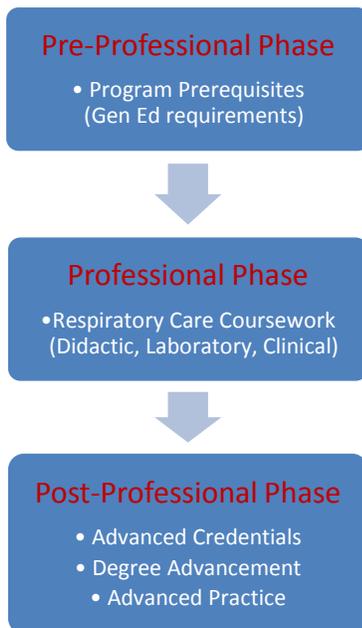
The pathway to completing a first-professional master’s degree program parallels that of the first-professional baccalaureate programs- namely, there is a pre-professional component (lower-division college-level coursework) prior to entering the professional phase (upper-division college-level coursework.) Applicants to a first-professional master’s degree program must complete general education requirements, program pre-requisites, and other program admission requirements (e.g., GRE) *along with providing proof of successful completion of a baccalaureate degree in a field other than respiratory care.* The first-professional master’s degree programs offer what can be called a “4+2” pathway which is designed to allow students to successfully pursue a master’s degree by first attending a four-year institution before transferring to the first-professional master’s degree program. As with the 2+2 pathway, this 4+2 pathway should not be confused with master’s degree programs that provide degree

advancement opportunities to graduates of first-professional baccalaureate degree programs. Typically, most or all program prerequisites must be taken prior to entry into the first year of the professional program. In addition to preparing students for entry into practice, the professional phase of these programs often includes significant course work in the areas of management and supervision, education, research and/or advanced clinical practice. The professional phase includes approximately two academic years of required didactic, laboratory and clinical coursework. Like some first-professional associate and baccalaureate degree programs, extended time frames for completing the program are offered to part-time students.

As of December 31, 2011, there were a total of 444 respiratory care programs and satellites. Of these, 2 (0.5%) offered the master’s degree upon graduation (Georgia State University and Rush University Medical Center.) The Masters of Science (MS) degree is the only master’s degree conferred to graduates of first-professional master’s degree programs, according to recent data collected by CoARC. As of December 31, 2011, all first-professional master’s degrees were conferred by Georgia State University, a four-year public university. Rush University Medical Center, a not-for-profit academic medical center, had not graduated any students during the most recent reporting period (CoARC, 2011, pp. 7-9).

POST-PROFESSIONAL PATHWAYS IN RESPIRATORY CARE PRACTICE

Figure 2 –Phases of Academic Progression in Respiratory Care



Completing pre-professional requirements and graduating from an accredited first-professional degree program are only the first two steps for therapists wishing to advance in their field and maintain the competency needed in this ever-changing health care environment (see Figure 2). Interest in post-professional programs is running high among current practitioners wishing to add to their existing skill level. CoARC is a strong supporter of academic progression through formal, degree-granting programs and lifelong-learning experiences to enhance the science and practice of respiratory care. CoARC encourages all associate degree respiratory therapists to continue their education in programs that grant baccalaureate, master’s, and doctoral degrees. The CoARC further recognizes that respiratory therapists with advanced education are needed in large numbers to serve as educators, researchers, managers, clinical specialists, and leaders throughout the healthcare delivery system (CoARC, 2011). Respiratory therapists looking to move into baccalaureate and/or graduate study may choose from several pathways. These options include the associate to baccalaureate and baccalaureate to master’s degree-advancement

programs; Certified Respiratory Therapist (CRT) to Registered Respiratory Therapist (RRT) programs; and the emerging advanced practice respiratory therapist (APRT) pathway. These various pathways for practicing respiratory therapists can be placed under the category of *post-professional programs*. CoARC

defines a post-professional degree program as *“an educational program designed to provide graduates of first-professional degree programs with enhanced knowledge and competencies necessary to meet their professional goals along with current and future expectations for respiratory care practice.”*

While most post-professional programs have some type of focus or concentration (i.e., research, education, or advanced practice) all post-professional programs aim to advance the skillset of the practicing therapist so that the graduate of the post-professional program can assume either additional or new roles and responsibilities within the profession. Further, many of these post-professional programs are offered online or in a blended online/on-campus (face-to-face) format in an effort to accommodate the busy schedules of practitioners.

CoARC defines a post-professional degree program as *“an educational program designed to provide graduates of first-professional degree programs with enhanced knowledge and competencies necessary to meet their professional goals along with current and future expectations for respiratory care practice.”*

CRT to RRT Completion Programs

Since the establishment of a formal accreditation process more than 40 years ago, first-professional degree respiratory care programs were categorized as being either a 100-level or a 200-level program. These 100-level programs, many of which did not award a degree prior to 2000, prepared graduates with demonstrated competence in the cognitive (knowledge), psychomotor (skills), and affective

(behavior) learning domains of respiratory care practice as performed by Certified Respiratory Therapists (CRTs). Graduates of 100-level programs had the opportunity to earn the National Board for Respiratory Care (NBRC) CRT credential. However, unlike graduates of 200-level programs, 100-level program graduates are not eligible to earn the Registered Respiratory Therapist (RRT) credential without additional education (i.e., 62 semester hours of college credit or associate degree in respiratory care) and clinical experience (NBRC, 2012). In June 2010, CoARC’s revision to Standard 3.01 (Program Goals) effectively discontinued the accreditation of 100-level programs. In December 2010, CoARC published a policy change stating that students enrolled in a 100-level program must graduate by December 31, 2012, to be recognized as graduates of a CoARC-accredited program and that all 100-level programs must voluntarily withdraw effective December 31, 2012. As a result of the changes over the past decade to CoARC accreditation standards and policies, changes to the NBRC exam eligibility criteria, and increased preference for the RRT credential by employers, growing numbers of practicing CRTs are seeking programs that will provide them with the

As defined by CoARC Policy 12.04, a CRT to RRT Completion Program is *“an educational program designed especially to meet the needs of the practicing respiratory therapist who, having already completed an accredited (100-level) respiratory care program is returning to school to complete program (200-level) requirements in order to meet eligibility requirements of the NBRC RRT examination.”*

education requirements necessary for eligibility to earn the RRT credential.

As defined by CoARC Policy 12.04, a CRT to RRT Completion Program is *“an educational program designed especially to meet the needs of the practicing respiratory therapist who, having already completed an accredited (100-level) respiratory care program is returning to school to complete program (200-level) requirements in order to meet eligibility requirements of the NBRC RRT examination.”* Emphasis in CRT to RRT completion programs is placed on teaching the competencies required of a registered respiratory therapist. By earning the CRT credential, a CRT to RRT student is considered to have advanced standing and is classified as an Advanced Placement (AP) student in the CoARC Annual Report of Current Status (CoARC, 2012, p. 54).

Degree Advancement Programs

CoARC Policy 12.03 defines a Degree Advancement Program as *“an educational program designed especially to meet the needs of the practicing respiratory therapist who, having already completed an accredited respiratory care program with an earned first professional degree is returning to school to obtain an advanced degree.”* Degree advancement programs focus on teaching professional skills at an advanced, intensive level. Degree advancement programs do not include coursework designed to prepare graduates to be eligible for the NBRC CRT or RRT examinations as such coursework should already have been covered in the first professional degree program (CoARC, 2012, p. 53). Currently, CoARC does not provide accreditation services for degree advancement programs, however, many of these programs obtain accreditation with their institutional (i.e., regional or national) accreditor. According to the Coalition for Baccalaureate and Graduate Respiratory Therapy Education (CoBGRTE), approximately 18 institutions offer a degree advancement program- most of whom already offer a first-professional degree program (CoBGRTE, 2012). The number of degree advancement programs appears to be increasing in recent years as more practicing therapists seek to further their education and skillset. Degree advancement programs provide an essential pathway for associate degree- and baccalaureate degree-prepared therapists who wish to expand and enhance previous knowledge and advance in their careers. Associate-to-baccalaureate and baccalaureate-to-master’s degree programs build on entry knowledge and competencies with course work to enhance professional development, prepare for a broader scope of practice, and provide a better understanding of the cultural, political, economic, and social issues that affect patients and influence care delivery.

CoARC Policy 12.03 defines a Degree Advancement Program as *“an educational program designed especially to meet the needs of the practicing respiratory therapist who, having already completed an accredited respiratory care program with an earned first professional degree is returning to school to obtain an advanced degree.”*

The Advanced Practice Respiratory Therapist (APRT) - An Emerging Pathway

In an effort to proactively address the growing prevalence of post-professional programs and what implications it may have for accreditation, the CoARC Board of Commissioners in March 2011 established an ad-hoc committee charged with providing the CoARC Board with recommendations on matters related to accreditation that initially included:

- Assisting in the development of accreditation standards for Master’s degree programs;
- Investigating methods to promote the accreditation process for Master’s degree programs; and
- Reviewing current models that provide graduate-level accreditation services at the first-professional and post-professional levels.

The ad-hoc committee, comprised of CoARC Board members and educators of current as well as prospective graduate programs, first discussed the two categories for master’s degree programs – first-professional and post-professional – and identified their differences (which are described in previous sections of this report). Following this process, the ad-hoc committee reviewed the educational models and accreditation pathways of other health professions in an effort to: (a) identify the similarities and differences as compared to current career pathways and academic progression in respiratory care practice and (2) develop an education model and accreditation pathway that is based on current and future needs for an advanced practitioner that can be integrated into to CoARC’s accreditation review process.

Thus far, the ad-hoc committee’s work has centered on two tasks: (1) providing recommendations to the Board for additional language in the first-professional degree accreditation standards pertaining to programmatic goals, faculty credentials, degree requirements, and curriculum/competencies; and (2) begin developing an educational model and accreditation pathway for a mid-level practitioner that would provide advanced respiratory care services. This post-professional program is envisioned to provide an experienced respiratory therapist with advanced knowledge, clinical skills, and professional behaviors, usually in a specific specialty practice area, such as critical care, education, research, or leadership/management. The ad-hoc committee has recommended using the working title ‘Advanced Practice Respiratory Therapist’ (APRT). The ad-hoc committee is currently in the information gathering/development phase for this post-professional program and is continuing to work on defining the roles and responsibilities, educational requirements, expected competencies, practice act and reimbursement implications with input from the AARC, NBRC, collaborating physician organizations, and other stakeholders. The ad-hoc committee will also be responsible for developing surveys that will be administered to CoARC’s stakeholders in an effort to identify their interest in seeking voluntary accreditation for this post-professional program once the accreditation standards have been developed and adopted.

CONCLUDING REMARKS

As it exists today, formal respiratory care education is offered primarily at the undergraduate level with accreditation services being provided by CoARC for first-professional degree programs only. Respiratory care education is defined by various degrees with different missions, professional content, degree nomenclature, accreditation status, credit hour requirements, and curricular focus. This creates a lack of clarity for prospective students and the public and poses challenges for the profession in responding to the needs of consumers of respiratory care services. The clarity of first-professional degree pathways is further compromised by the fact that the current minimum requirements for accreditation at the master's and baccalaureate levels are identical to those for associate programs, which implies that there is no expectation for a higher level of achievement or significantly advanced coursework at the baccalaureate and graduate level.

Post-professional education in the form of degree advancement programs is becoming increasingly more common at the baccalaureate level and at the master's level, however, formal review and approval of such programs are provided by either a state education agency and/or institutional accreditor. At present, there is no programmatic accreditation available for post-professional degree respiratory care programs. As with first-professional degree programs, this also creates a lack of clarity for practitioners and the public and poses challenges for the profession in responding to the needs of consumers of respiratory care services. The clarity of post-professional degree pathways is also further compromised by the fact that in post-professional programs, the varied expectations for prerequisites in the undergraduate degree likely contribute to varied levels of professional competency among graduates. Further, the varying quality of post-professional programs indicates that post-professional respiratory care education is driven as much by market need as by any consistent set of expectations developed by the profession or enforced through the accreditation process. Students earning post-professional degrees will demonstrate varying degrees of professional skill because, post-professional degree programs pursue institutional but not programmatic accreditation.

It is incumbent on the profession, as it continues to evolve, to clarify the role of first-professional and post-professional programs and to specifically define and differentiate the competencies of expected graduates from both types of programs. Although commonly understood definitions and established competencies will provide greater clarity, perhaps the only way to maintain consistency and ensure academic quality for post-professional programs is to offer accreditation services, since accreditation is a process of peer review meant to ensure and improve the quality of educational programs. This accreditation review process would need to recognize the "value-added" above and beyond the first-professional degree, so the accreditation standards and guidelines would be more rigorous. It is important to point out that more rigorous accreditation requirements would not be driven by CoARC, but rather would be developed in response to demands by professional organizations, testing and regulatory agencies, and employers. Also, offering additional accreditation services for post-professional programs would not negatively impact institutions offering existing first-professional degree programs. These institutions could seek dual accreditation.

Conceptual definitions for first-professional degree and post-professional degree programs have been articulated in this report and are offered as a starting point for further dialogue. These continued discussions must, at a minimum, come to a consensus on the degree nomenclature, educational and accreditation requirements, and expected professional competencies of program graduates in the context of what is best for the patients who are the recipients of respiratory care services. The progress towards reaching consensus as well as the outcomes of these deliberations should be clearly articulated to all constituencies, especially to respiratory care educational programs and the public. By so doing, this will add clarity to the career entry and academic progression pathways for the profession.

Resources used to develop this report and suggested sources for further reading:

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