



RESPIRATORY
CARE BOARD
OF CALIFORNIA

Professional Qualifications Committee Education Requirements Study Session 10/20/2021

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Attachment: 5
Meeting Date: 10/20/2021

Education Requirements Study Session 6/30/2021

- History of RC Profession
- Regulatory and Professional Organizations
- RCB Strategic Plan
- Landscape Supporting Increased Educational Requirements
- Case Study - Nursing



Education Requirements Study Session 10/8/2021

- Case Study #2: Physical Therapy
- Academic Requirements
- Respiratory Care Workforce Study
- Employer Perspectives
- Next Steps



Case Study #2: Physical Therapy



Case Study Physical Therapy

- History of Physical Therapy
 - 1921: American Physical Therapy Association
 - 1927: First Bachelors Program NYU
 - 1928: Accreditation Standards
 - 1935: Credential Process
 - 1954: Standardized Licensing Exam
 - 1969: First graduates of PTA Program
 - 1973: First PhD Program
 - 2000: [Vision Statement](#) Established

<https://centennial.apta.org/home/timeline/>



Physical Therapy Profession Licensure Requirements

- **Physical Therapist**
 - Completion an accredited four-to-six-year college program
 - Prerequisites similar to other health care programs
 - Pass BOTH the (1) National Physical Therapy Exam and (2) California Law Exam (Practice of Physical Therapy)
- **Physical Therapist Assistant**
 - Completion an accredited two-year college program
 - Prerequisites similar to other health care programs
 - Pass BOTH the (1) National Physical Therapy Assistant Exam and (2) California Law Exam (Practice of Physical Therapy)
- **Physical Therapy Aide**
 - On the job trainee
 - No formal education
 - Supervised by a licensed Physical Therapist

https://www.ptbc.ca.gov/consumers/consumer_info_faq.shtml#credential



Physical Therapy Profession Practice

- **Physical Therapists *practice in a wide variety of settings***, including hospitals, rehabilitation clinics, private practices, home care, schools, and in industry.
- **Physical Therapist Assistants may *assist in the provision of physical therapy treatment without the physical therapist being in the same facility***, as long as the ***physical therapist assistant is supervised***. A physical therapist assistant is only ***permitted to provide physical therapy treatment as directed by the supervising physical therapist***. A physical therapist assistant is not allowed to perform the initial evaluation, re-evaluations, change a treatment plan, supervise another physical therapist assistant and/or physical therapy aide or conduct a discharge and discharge summary.
- **Physical Therapy Aides may only provide physical therapy treatment in the same facility as the supervising physical therapist and is required to have direct and immediate supervision**. Treatment by a physical therapy aide must also include treatment by the supervising physical therapist on that same day.

https://www.ptbc.ca.gov/consumers/consumer_info_faq.shtml#credential



Public Comment Board Discussion





CA Licensure Academic Requirement

All applicants for licensure must complete an education program for respiratory care that is accredited by the [Commission on Accreditation of Allied Health Education Programs](#) and been awarded a **minimum of an associate degree** from an institution or university accredited by a regional accreditation agency or association recognized by the United States Department of Education.



Associate Degree Types

ASSOCIATE OF SCIENCE IN RESPIRATORY CARE (ASRC)

- Completion of the degree entails over 60 credit hours often past two years, including credits in a particular program specialization.
- Major credits in the field of study
- General education credit requirements of a four-year bachelor's degree
- Focuses on coursework in the direct sciences.

ASSOCIATE OF APPLIED SCIENCE IN RESPIRATORY CARE (AASRC) ASSOCIATE OF OCCUPATIONAL STUDIES IN RESPIRATORY CARE (AASRC)

- Completion of the degree entails 60 credit hours which can accomplished in two years, including credits in a particular program specialization.
- Major credits in the field of study
- Minimal general education requirements
- Focuses on coursework in the direct sciences.
- Less credits applicable for transfer



Degree Requirements A.S. vs A.A.S./A.O.S.

Requirements	A.S.	A.A.S. A.O.S.
Prerequisites: Medical Term, Anatomy, Physiology, Chemistry, Microbiology, Algebra, Physics	24-29	< 24
Core Major Coursework (aligned with CoARC standards)	40-55 ~ 48	40-55 ~48
Clinical Experience	Varies	Varies
General Education	> 18	< 18
TOTAL:	82 - 106	60 - 75



CoARC Accredited Programs

Type	CA	FL	TX
Associate of Science (A.S.)	31	22	2
Associate of Applied Science (A.A.S.)	1	1	27
Associate of Occupational Studies (A.O.S)	3	0	0
Bachelor of Science (B.S.) (Entry into Practice)	1	3	5
Bachelor of Science Degree Advancement (B.S.) (Entry after completing Associate Degree)	2	0	0
Masters of Science (M.S.)	0	0	3



Public Comment Board Discussion



California Respiratory Care Workforce Study



Tim Bates, MPP Ginachukwu Amah, BS Lisel Blash, MA Christopher Toretzky, MPH Joanne Spetz, PhD

Philip R. Lee Institute for Health Policy Studies
University of California, San Francisco May 1, 2017

https://healthforce.ucsf.edu/sites/healthforce.ucsf.edu/files/publication-pdf/17_final_workforce_study.pdf

Study Conduct

- The principal objective of the study was to discover the **perceptions and opinions** of key stakeholders on a range of critical respiratory care workforce issues.
- The study was conducted over the course of 18 months between July 2015 and December 2016.

Objectives

- To assess
 - the preparedness of new graduate respiratory therapists (RT) to enter the workforce
 - the supervised clinical experiences in respiratory therapy education
 - the minimum degree requirements for entry into professional practice, utilization of RT-driven protocols
 - the continuing education requirements for RT's
- Additional objectives
 - to describe curricular content differences between baccalaureate-level and associate degree-level RT education programs
 - to describe differences in the stated competencies and minimum curricular content requirements between entry-level RT education programs and physician assistant, physical therapy, nurse practitioner, and baccalaureate registered nursing education programs
 - to conduct a search of academic literature to identify scholarly work that addresses the relationship between the type of degree earned by respiratory therapists and patient outcomes

Preparedness of new graduate respiratory therapists

- **Directors of respiratory therapy education programs** identified **critical thinking** as the single most important competency area that should receive greater emphasis in entry-level respiratory therapy education.
- Many of the **education directors** noted that employers consistently provide feedback that **students' diagnostic skills are "not where they should be."**
- **RTs** that participated in the focus groups reported new graduates' diagnostic and clinical reasoning **skills are underdeveloped**, describing new graduates as having conceptual knowledge of tests, procedures, equipment and modes of therapy, but being unable to connect what they have learned with the patient they need to treat.



Preparedness of new graduate respiratory therapists (continued)

- **Only 42%** of surveyed **RC directors** reported they believe that new graduates are **prepared to incorporate evidence-based medicine** into their clinical decision-making.
- **Education directors** reported that evidence-based medicine is woven into all aspects of the curriculum, however, it was acknowledged that there is **substantial variation in the extent to which students are exposed to evidence-based practice during their supervised clinical experiences.**
- **RTs** cited the importance of students having the opportunity to **complete rotations at clinical sites that have a highly engaged respiratory care department.**



Minimum degree requirements for entry into professional practice

- **RC directors** felt strongly that moving respiratory therapy education to the **bachelor's level would raise the field's professional standing and help create career opportunities.**
- **Education program directors** expressed the belief that shifting to the **bachelor's degree would allow more in-depth coverage of topics** that are highly compressed in the current curriculum due to time constraints, and that it **would likely increase students' exposure to clinical procedures.** However, the most important factor driving support among education directors was the expectation that a bachelor's degree program would **further encourage the development of critical thinking and clinical reasoning.**
- **RTs** in the focus groups saw value in the **additional didactic and clinical training, believing it would produce therapists who are clinicians as opposed to technicians.**



Minimum degree requirements for entry into professional practice (continued)

- **There is widespread support for moving respiratory therapy education to the baccalaureate degree level, however, education directors identified several concerns, including the administrative demands such a transition would entail.**



Curricular differences case study

- Compares
 - Associate Degree program from California Community College system
 - Baccalaureate Degree program from a private, non-profit University

Table 9. Number of required semester units by content area and by degree type

Description	Number of semester units	
	Baccalaureate degree	Associate degree
Prerequisite coursework	52	29
Required units in first year of RT program*	41.33	22
Required units in second year of RT program	34.67	26
Total required units in RT program	76	48

* For both programs, this includes the summer term between the first and second years.



Curricular differences case study (continued)

Table 10. Hours of supervised clinical training and laboratory-based semester units by degree type

Description	Baccalaureate degree	Associate degree
Number of supervised clinical hours	1,200	850
Number of laboratory-based semester units	14	6



Curricular differences case study (continued)

Table 11. Number of required semester units by selected content area and by degree type

Description	Number of semester units	
	Baccalaureate degree	Associate degree
Pathology/pathophysiology	7.33	3
Statistics/research methods	4	0
Pulmonary rehabilitation	2	0
Population health/health promotion/clinical prevention	2	0
Case management	1.33	0
Educational/instructional methods	1.33	0
Leadership	1.33	0



Curricular differences case study (continued)

Table 12. Single-topic courses by degree program

Description	Baccalaureate degree	Associate degree
Cardiopulmonary anatomy & physiology	X	X
Principles of physics in respiratory therapy	X	X
Neonatal/pediatric care	X	X
Cardiopulmonary pathophysiology	X	X
Respiratory therapy equipment & devices	X	X
Mechanical ventilation	X	
Diagnostic tests & procedures	X	
Patient assessment	X	
Pharmacology	X	
Pathology	X	
Pulmonary function methods	X	
Pulmonary rehabilitation	X	
Cardiology	X	
12-lead ECG interpretation	X	
Population health/health promotion/clinical prevention	X	
Case management	X	
Psychosocial elements of clinical care	X	
Statistics/research methods	X	
Ethics	X	
Educational/instructional methods	X	
Leadership	X	



Patient Outcomes

- **Our literature review did not identify** any scholarly work specifically addressing the relationship between a respiratory therapist's education level and patient outcomes.
- Nor did it identify any scholarly work examining the outcomes of respiratory therapy continuing education where degree type was a factor.
- Our review **also failed to discover** any scholarly work examining formal disciplinary actions taken against respiratory therapists **in which skills deficiencies or educational background was implicated.**

Hierarchy of Evidence



Public Comment Board Discussion



Employer Perspectives

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Public Comment Board Discussion



Next Steps

- Summarize study sessions key points
- Inhouse workforce study
- Formulate recommendations