



Comparing AARC Human Resource Study Results from 2014 and 2017



Introduction

The American Association for Respiratory Care (AARC) is the professional membership organization for respiratory therapists and has periodically conducted human resource studies of therapists and institutions that employ therapists.

In 2014, the AARC commissioned its last full study of therapists and employers to update information that has served multiple goals including strategic planning, government relations, and programming. Previous full studies were done while following similar methods in 2009, 2005, and 2000.

In 2017, the AARC commissioned a study to gather information about the education levels of respiratory therapists. The AARC prepared and made available a survey with the intent that the individuals who were respiratory therapists would respond.

Opportunities to respond to the survey were sent to the sample unsolicited by potential responses. Members of the sample then choose whether to respond. Therefore, the sample was composed of volunteers.



METHODS

A survey of this population was last completed in 2014. The instrument from that study was the starting point for development of an abbreviated 2017 survey focused on education levels. Respondents interacted with the survey through the Internet on a secure server. Responses were recorded electronically in a database on the server.

Survey sampling came from populations of credentialed therapists. Emails were distributed to the therapist survey sample.

All invitations encouraged a snowball sampling technique in which recipients were asked to encourage others in their institutions to respond to the survey for individual therapists.

Information summarized in this document is based on responses from 15,234 survey respondents in 2014 and 19,281 survey respondents in 2017. To whatever degree one was confident in the results of the 2014 study, the larger sample should increase confidence in the 2017 results.

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DEMOGRAPHICS

Age

The typical respondent to each survey remained at 45 years of age based in spite of the passage of three years.

Table 1: Age of respondents

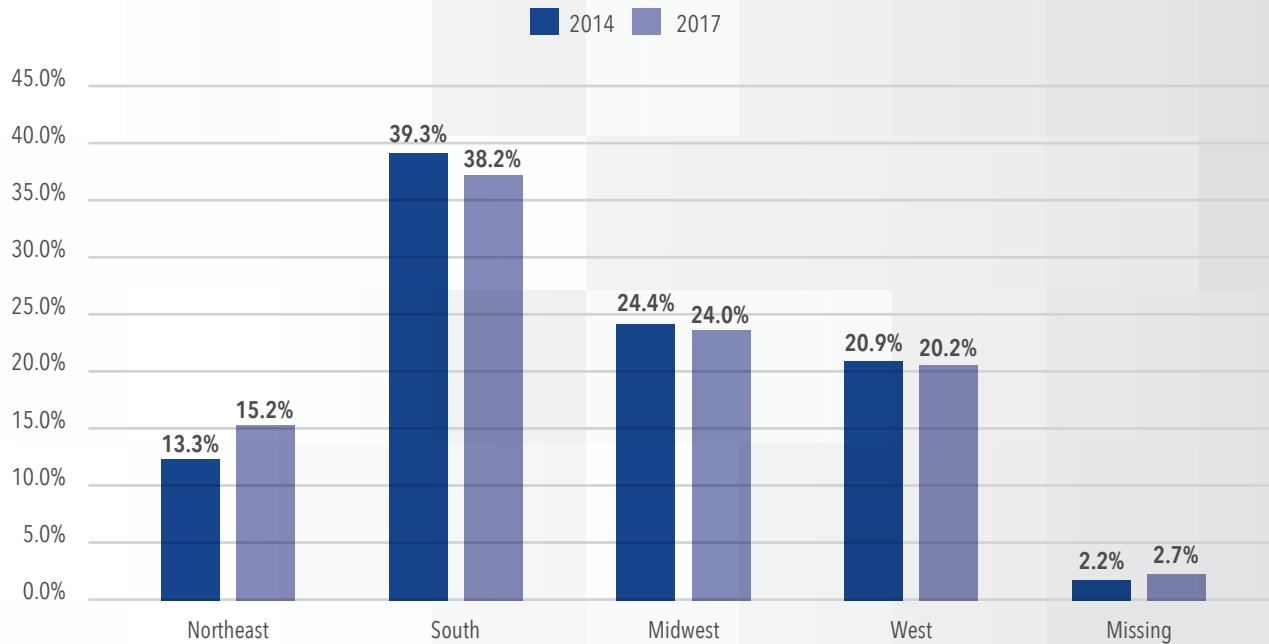
Year	Valid	Missing	Mean	Std. Error of Mean	Std. Deviation	Minimum	Maximum
2014	15087	147	45.06	.096	11.761	18	86
2017	19005	276	45.30	.088	12.157	17	99

DISTRIBUTION OF RESPONDENTS BY REGION

Responses were combined into the four regions shown in Figure 1.

The distribution of responses in 2017 was similar to the the distribution noted in 2014.

Figure 1: Distribution of respondents by region



Northeast: MA, RI, NH, ME, VT, CT, NJ, NY, PA

South: DC, DE, MD, VA, WV, NC, SC, GA, FL, AL, TN, MS, KY, LA, AR, OK, TX

Midwest: OH, IN, MI, WI, IL, IA, MN, SD, ND, MO, KS, NE

West: MT, CO, WY, ID, UT, AZ, NM, NV, CA, HI, OR, WA, AK

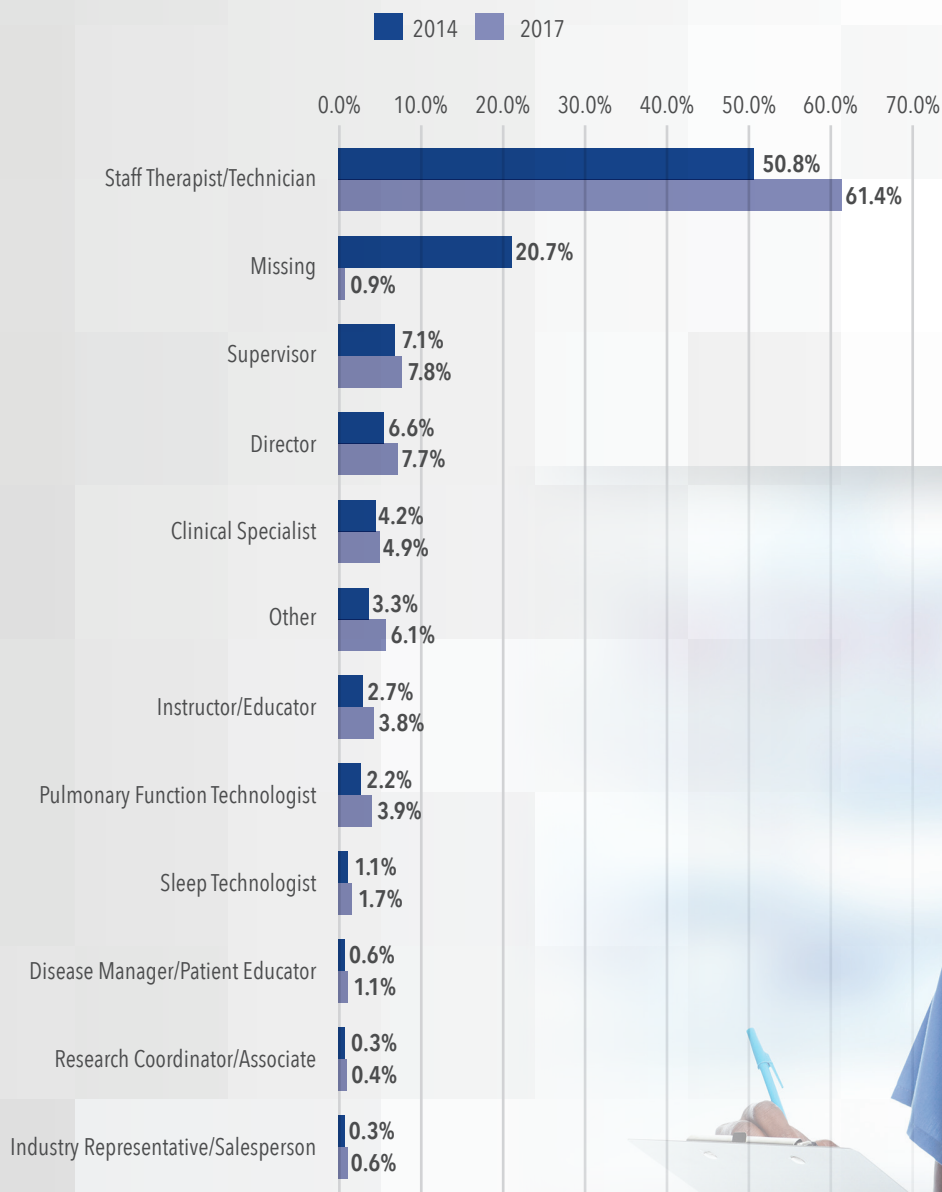
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PRIMARY JOB

The big change in responses about the title of one's primary job was that virtually all 2017 respondents submitted a response to the item while 21% had omitted a response in 2014.

Interestingly, this question was optional on both the 2014 and 2017 surveys. The percentage who indicated that they were a "staff therapist" was notably higher (Figure 2).

Figure 2: Primary job titles of respondents
What is the title for your primary job?

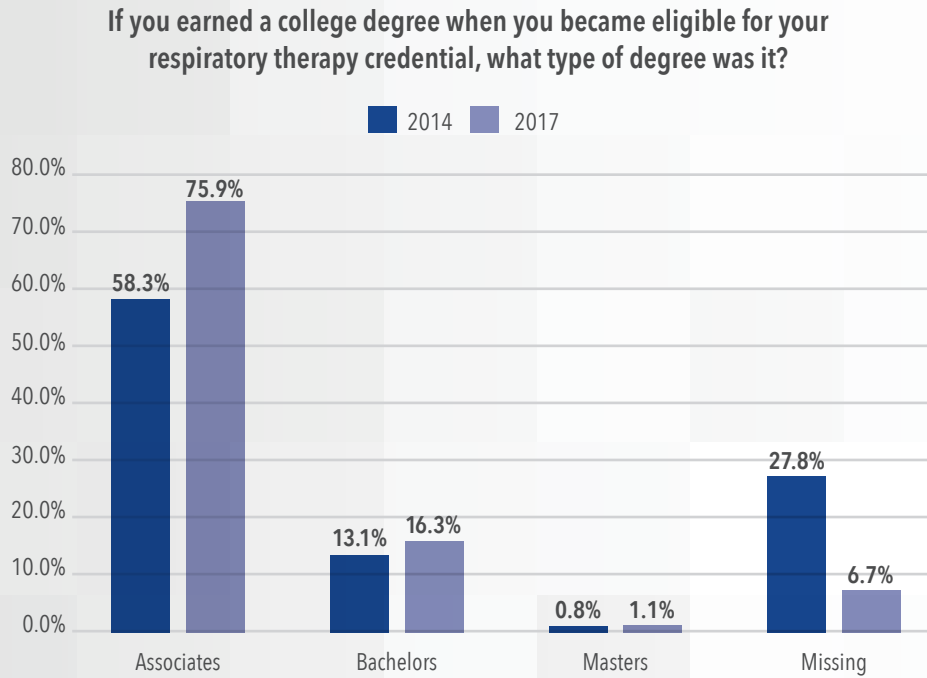


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ACADEMIC DEGREE LINKED TO RESPIRATORY THERAPY ENTRY

Many more respondents elected to provide entry-to-practice respiratory care degree in the 2017 survey than in 2014. The percentage who selected "Associates" as their entry degree was notably higher (Figure 3).

Figure 3: Degree earned by respondents for respiratory therapy credential eligibility



HIGHEST ACADEMIC LEVEL

Many therapists in the population have advanced their higher education level after entering the profession, which is why the percentage of those with at least a bachelor's degree is higher than observed when they enter (Figure 4). The percentage who had achieved at least a bachelor's degree had increased to 43.2% in 2017, up from 40.5% in 2014 (Figure 5).

Figure 4: Highest academic level achievement

What is the highest academic level you have achieved?

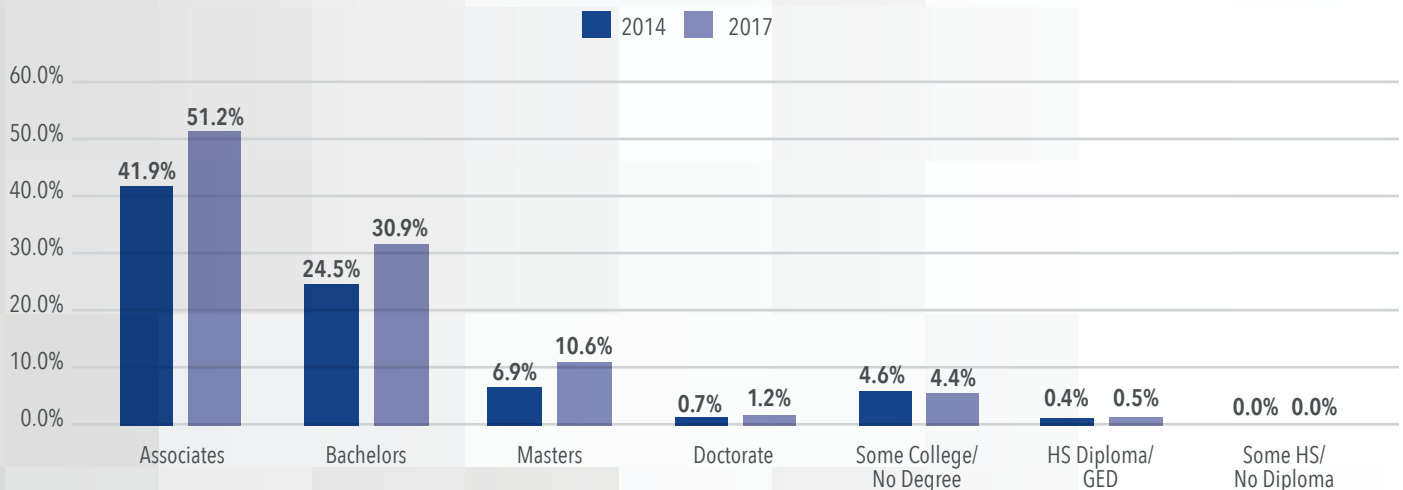




Figure 5: Highest academic level achievement

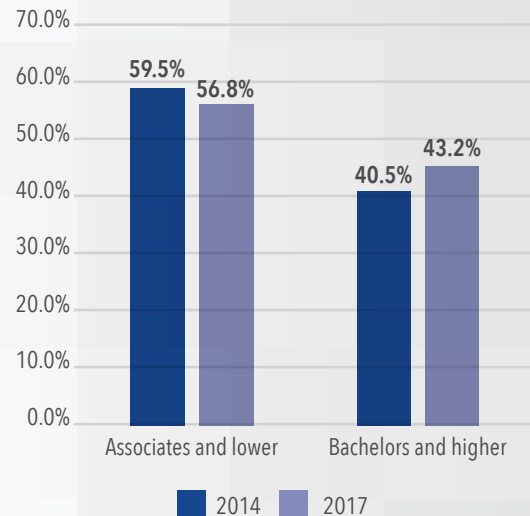
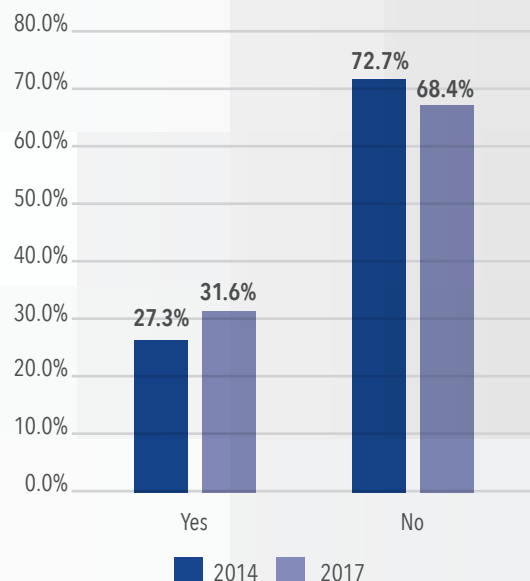


Figure 6: Advanced degree in a health-related field
Do you hold a baccalaureate or graduate degree in a health-related field?

The respondents also identified the emphasis area of their advanced degrees.

Of those who responded that they have earned a bachelor's degree or higher, 31.6% identified that this degree is in a health-related field.

This response is slightly higher than responses on the 2014 survey (Figure 6).



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Those who responded affirmatively to the previous question were asked to specify the health-related field of the advanced degree (Figure 7). The most common health-related field reported was respiratory therapy.

Figure 7: Health-related field of the advanced degree
In what field of study is your health-related degree?

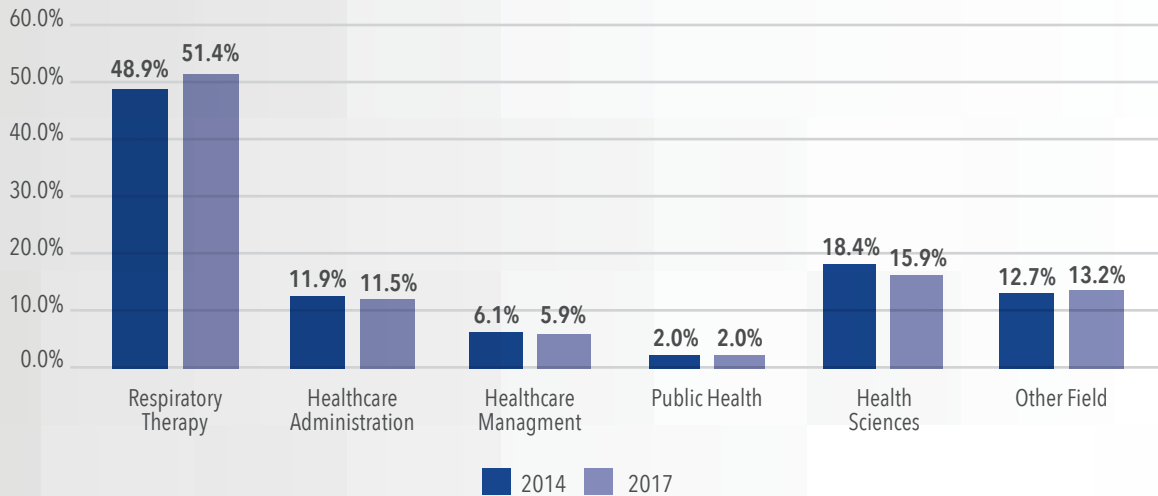
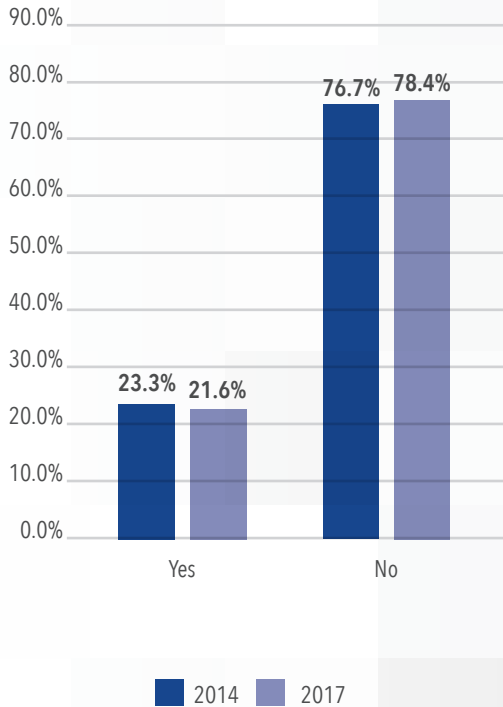


Figure 8: Presently pursuing a higher academic degree
Are you presently pursuing a higher academic degree?



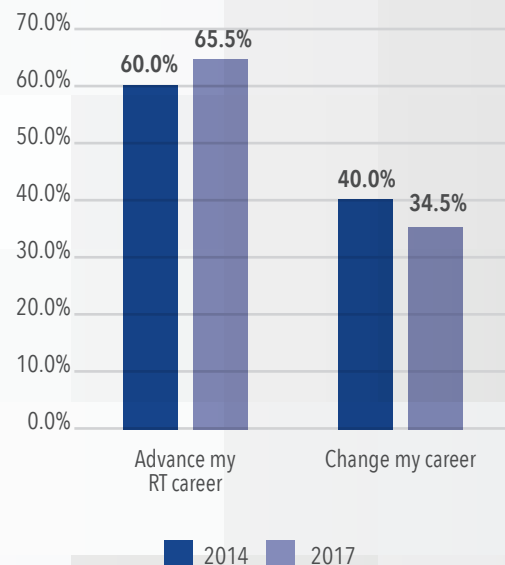
Of those who responded to the survey, 21.6% indicated that they are currently pursuing a higher academic degree (Figure 8).



Figure 9: Goal behind pursuit of higher degree
What best describes your goal for pursuing a higher academic degree?

Respondents who indicated that they are currently pursuing a higher academic degree were also asked about their motivation for pursuing an advanced degree.

The number of respondents seeking a higher degree to advance their RT career increased from the 2014 survey (Figure 9).



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Information about the respondents' earned credentials from the National Board for Respiratory Care (NBRC) and AARC membership were also obtained.

Figure 10: NBRC credentials
Which of the following NBRC credentials have you earned?

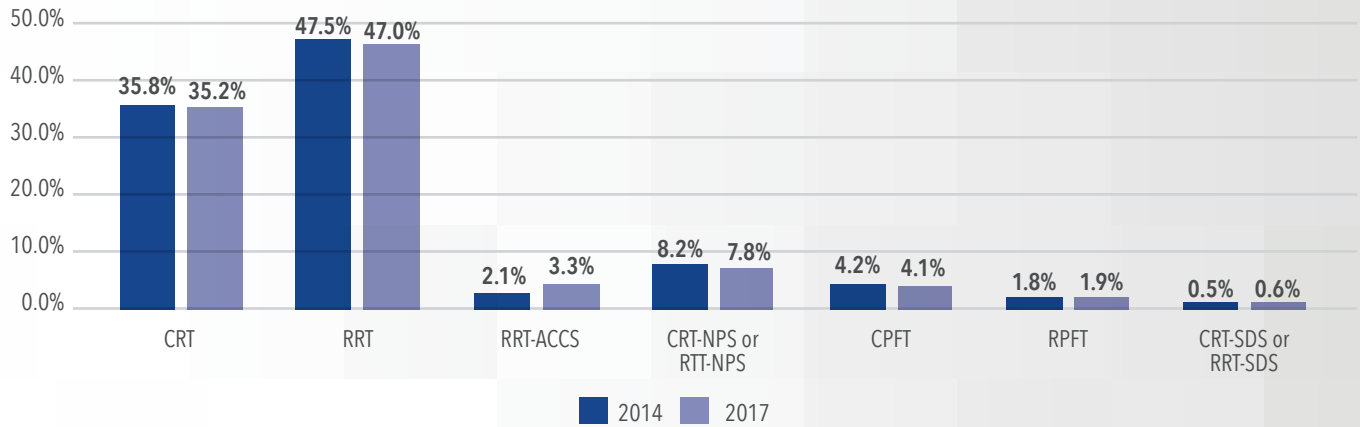
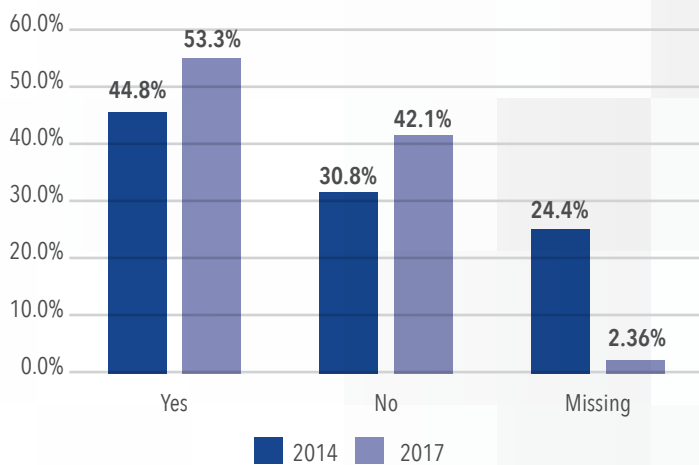


Figure 11: AARC membership
Are you currently a member of the AARC?



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DISCUSSION

Of interest is the percentage of respondents who have earned a bachelor's degree or higher or who are pursuing a bachelor's degree. In the 2017 survey results, 12.7% of all respondents in the group called Associates and Lower indicated that they were pursuing a higher academic degree. A total of 43.2% of all respondents indicated they had earned a bachelor's degree or higher.

After summing these two values (12.7% + 43.2%), 55.9% of the study sample had at least achieved a bachelor's degree or were working towards a higher degree of some kind (Table 2). However, there were some in the group labeled Associates and Lower who had not yet achieved an associate's degree, so for them the higher degree could be something less than a bachelor's degree.

Neither the 2014 nor the 2017 survey asked respondents to identify the higher degree on which they were working.

Table 2: Cross tabulation of academic subgroup and pursuing a higher academic degree (2017)

Are you presently pursuing a higher academic degree?		Yes	No	Total	
Academic subgroup	Associates and Lower	Count	2414	8397	10811
		% of Total	12.7%	44.1%	56.8%
	Bachelors and Higher	Count	1698	6512	8210
		% of Total	8.9%	34.2%	43.2%
Total		Count	4112	14909	19021
		% of Total	21.6%	78.4%	100.0%



Table 3: Cross tabulation of highest academic level and pursuing a higher academic degree

Are you presently pursuing a higher academic degree?		Yes	No	Total	
What is the highest academic level you have achieved?	Some HS/No diploma	Count	4	3	7
		% of Total	0.0%	0.0%	0.0%
	HS diploma/GED	Count	9	79	88
		% of Total	0.0%	0.4%	0.5%
	Some college/No degree	Count	128	721	849
		% of Total	0.7%	3.8%	4.5%
	Associates	Count	2273	7594	9867
		% of Total	11.9%	39.9%	51.9%
	Bachelors	Count	1316	4635	5951
		% of Total	6.9%	24.4%	31.3%
	Masters	Count	359	1671	2030
		% of Total	1.9%	8.8%	10.7%
	Doctorate	Count	23	206	229
		% of Total	0.1%	1.1%	1.2%
Total	Count	4112	14909	19021	
	% of Total	21.6%	78.4%	100.0%	



Table 3 was produced to provide a more detailed view

Summing the percentages linked to showed that 55.1% of the study sample had achieved a bachelor's degree or were definitely working to achieve a bachelor's degree.

- » Bachelor's = 31.3%
- » Master's = 10.7%
- » Doctorate = 1.2%
- » Associate's-working-on-a-higher-degree = 11.9%

The difference between 55.1% and 55.9% is small, so we are confident in saying that 55% to 56% of the sample had achieved a bachelor's degree or might soon achieve the degree.

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Results of this study also showed that about one-third of respondents were motivated to pursue a higher degree to open career opportunities for themselves, which includes leaving the profession.

Attempting to predict the point that the therapist population will hit a threshold for bachelor's degree acquisition will be negatively affected by the fact that some therapists who achieve a bachelor's will leave the profession, so one should take care to set realistic expectations.

Respondents in leadership positions like Director, Supervisor, and Clinical Specialist tended to show higher than average rates of achieving a bachelor's degree. Those involved in teaching new respiratory therapists (Instructors) and patients (Disease Educators) also showed above average rates as did those who worked in industry and were primarily researchers (Table 4).

Table 4: Cross tabulation of job position and highest academic degree

		Some HS/ No diploma Avg=0.0%	HS diploma/ GED Avg=0.5%	Some college/ No degree Avg=4.5%	Associates Avg=51.9%	Bachelors Avg=31.2%	Masters Avg=10.7%	Doctorate Avg=1.2%	Total
Director	Count	1	0	43	301	483	564	77	1469
	% within job title	0.1%	0.0%	2.9%	20.5%	32.9%	38.4%	5.2%	100.0%
Clinical Specialist	Count	1	5	39	427	328	110	11	921
	% within job title	0.1%	0.5%	4.2%	46.4%	35.6%	11.9%	1.2%	100.0%
Supervisor	Count	0	4	83	631	530	214	14	1476
	% within job title	0.0%	0.3%	5.6%	42.8%	35.9%	14.5%	0.9%	100.0%
Staff Therapist/ Technician	Count	5	58	486	7156	3464	539	34	11742
	% within job title	0.0%	0.5%	4.1%	60.9%	29.5%	4.6%	0.3%	100.0%
Pulmonary Function Technologist	Count	0	5	79	379	234	47	3	747
	% within job title	0.0%	0.7%	10.6%	50.7%	31.3%	6.3%	0.4%	100.0%
Sleep Technologist	Count	0	3	20	198	84	12	2	319
	% within job title	0.0%	0.9%	6.3%	62.1%	26.3%	3.8%	0.6%	100.0%
Instructor/Educator	Count	0	2	13	138	249	273	51	726
	% within job title	0.0%	0.3%	1.8%	19.0%	34.3%	37.6%	7.0%	100.0%
Disease Mgr/ Pt Educator	Count	0	0	3	74	101	26	0	204
	% within job title	0.0%	0.0%	1.5%	36.3%	49.5%	12.7%	0.0%	100.0%
Research Coordinator/ Associate	Count	0	0	2	18	29	25	4	78
	% within job title	0.0%	0.0%	2.6%	23.1%	37.2%	32.1%	5.1%	100.0%
Industry Rep/ Salesperson	Count	0	0	7	36	48	27	0	118
	% within job title	0.0%	0.0%	5.9%	30.5%	40.7%	22.9%	0.0%	100.0%
Other	Count	0	10	72	472	369	194	33	1150
	% within job title	0.0%	0.9%	6.3%	41.0%	32.1%	16.9%	2.9%	100.0%
Total	Count	7	87	847	9830	5919	2031	229	18950
	% within job title	0.0%	0.5%	4.5%	51.9%	31.2%	10.7%	1.2%	100.0%

Table 5: Cross tabulation of level of education and AARC membership

For therapists with an associates degree, about half chose AARC membership.

Lower rates of AARC membership are observed in therapists with less than an associate’s degree.

Holding a degree above the associate level was associated with two-thirds to three-fourths participation in AARC membership (Table 5).

		Yes	No	Total
Some HS/No diploma	Count	2	5	7
	% within highest academic level	28.6%	71.4%	100.0%
HS diploma/GED	Count	33	48	81
	% within highest academic level	40.7%	59.3%	100.0%
Some college/ No degree	Count	398	429	827
	% within highest academic level	48.1%	51.9%	100.0%
Associates	Count	4811	4891	9702
	% within highest academic level	49.6%	50.4%	100.0%
Bachelors	Count	3727	2135	5862
	% within highest academic level	63.6%	36.4%	100.0%
Masters	Count	1490	513	2003
	% within highest academic level	74.4%	25.6%	100.0%
Doctorate	Count	166	59	225
	% within highest academic level	73.8%	26.2%	100.0%
Total	Count	10627	8080	18707
	% within highest academic level	56.8%	43.2%	100.0%

FUTURE RESEARCH

The 2017 survey demonstrated that the subgroup who had earned a general bachelor’s degree rather than an RT bachelor’s degree were more likely to hold a graduate degree in 2017 by a margin of 6.3% (Table 6).

Whether this can be attributed to people with general bachelor’s degrees more readily meeting graduate programs’ admissions requirements or the tendency of people with a specialty bachelor’s degree to feel less comfortable with topics outside of RT would require additional research.

Table 6: Cross tabulation of degree type on becoming a respiratory therapist and holding a graduate degree

		Hold a Graduate Degree	No	Yes	Total
RT Bachelors Degree	Count	2443	670	3113	
	% within bachelors degree	78.5%	21.5%	100.0%	
General Bachelors Degree	Count	3359	1294	4653	
	% within bachelors degree	72.2%	27.8%	100.0%	
Associates	Count	9762	0	9762	
	% within bachelors degree	100.0%	0.0%	100.0%	
Total	Count	15564	1964	17528	
	% within bachelors degree	88.8%	11.2%	100.0%	

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As long as additional research is under consideration, another potential factor influencing behavior in this population could be illuminated by comparing the perceptions of those in the RT Bachelor's Degree group to those in the General Bachelor's Degree group, about the amount of effort required to achieve the next degree.

We can speculate that the typical person in the General Bachelor's Degree group is accustomed to progressing in increments (two years to get an associate's degree, work for a while, then two more years to get a general bachelor's degree or pursue a general bachelor's degree immediately upon graduation with an associate's degree) while those in the RT Bachelor's Degree group are more accustomed to achieving their bachelor's degrees over one block of time.

Another point worth comparing would be the assumption that people from the two groups make about whether they must stop working to pursue a graduate degree. It could be that those in the General Bachelor's Degree are more likely to assume that they can continue to work while pursuing a graduate degree because they are more likely to have done it before.





American Association
for Respiratory Care

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