Introduction to 2024 Studies of Human Resources

Prepared by

Robert C. Shaw, Jr., PhD,
Vice President of Examinations

And

Jennifer L. Benavente, MS
Research Associate

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Table of Contents

Study Purpose and Methods 1
The Organization of these Reports 1
Historic Trends 1
Population Projections 1
Vacant Staff Therapist Jobs 2
Staff Therapist FTEs 3
Graduations 3
Compensation 4
Demographics 5
Gender 5
Academic Achievement 5
NBRC Credentials 6

List of Figures and Tables

Figure 1. 28-Year Population Trend in Therapist Licenses 2

Table 1. Trend in Vacant Staff Therapist FTEs in Each Acute Care Hospital 2
Table 2. Trend in FTEs for Staff Therapists in Each Acute Care Hospital 3
Table 3. Trend in RRT-Eligible Graduates from Education Programs 4
Table 4. Percentages of Therapists by Gender* 5
Table 5. Percentages by Academic Achievement* 6
Table 6. Percentages of Responses by NBRC Credentials* 7

Study Purpose and Methods

Objectives for human resources studies conducted by the American Association for Respiratory Care (AARC) were to document information about the number of working therapists, venues of practice, demographic characteristics of the workforce, and the compensation they received.

The studies sampled sets of (1) individual therapists, (2) technical directors of hospital departments, and (3) program directors of education programs. A report has been written summarizing survey results from each of these groups.

The Organization of these Reports

Each of the three survey reports are similarly organized. An opening Summaries section provides highlights observed in the results along with short-term trends since the last study. Following a brief introduction, a Methods section describes how each population was sampled; the size of each sample, and the way data were analyzed. Survey responses were captured by direct electronic means for each study while using the SurveyMonkey® platform. The Results section of each report emphasized figures describing survey responses when possible with links to more detailed frequency tables in the Appendices section.

Historic Trends

Population Projections

The population of licenses held by respiratory therapists has shown uninterrupted growth over the 32 years that the AARC has been tracking the numbers, which is displayed in Figure 1. These projections have likely become more accurate since they recently have been based on direct counts from state licensing agencies. Some therapists are licensed in more than one state, so a low level of double-counting has been expected among these population estimates. However, these are the best numbers available to the AARC about the trend in the size of the licensed therapist population. Another fact that Figure 1 reveals is that the growth has been linear in nature over nearly three decades. Projecting future populations is simplified by this fact, which is why the x and y scales are extended beyond the available points in time.

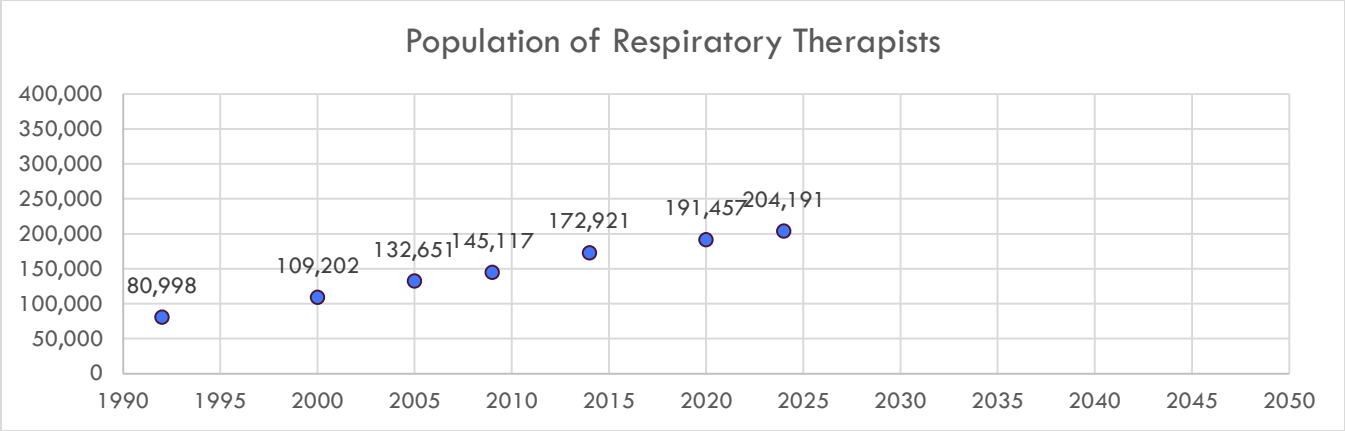

Figure 1. 32-Year Population Trend in Therapist Licenses

Vacant Staff Therapist Jobs

Technical directors in acute care hospitals reported the number of vacant FTEs associated with the staff therapist job position. A trend is described in Table 1 for three points over ten years. In 2014, the majority of respondents had no vacant FTEs for the staff therapist position as indicated by a median value of zero. However, many hospitals still had at least one vacant FTE as indicated by a mean value that was close to one. Six years later, the mean had risen to nearly two while the median rose to one. In 2024, directors reported a further increase in vacant positions such that the mean was close to four and the median was almost one indicating that some hospitals had a large number of vacancies, but half of the responding hospitals had one or less.

Table 1. Trend in Vacant Staff Therapist FTEs in Each Acute Care Hospital

Year	N	Mean	Median
2014	558	0.89	0.00
2020	291	1.93	1.00
2024	163	3.91	.90

Staff Therapist FTEs

Nationwide there was a trend described in Table 2 toward fewer FTEs within acute care hospitals for staff therapists. When coupled with the information from Table 1, previous years have been associated with more therapists working in a typical acute care hospital, which has few vacant staff therapist positions to fill. More recently results indicate fewer positions with slightly more vacancies.

Table 2. Trend in FTEs for Staff Therapists in Each Acute Care Hospital

Year	N	Mean	Median
2014	558	29.9	18
2020	291	25.5	12
2024	163	23.3	7

Information from Figure 1 should be integrated with information from Tables 1 and 2 because growth in the population of licensed therapists would at first seem to predict more frontline staff therapist positions. There are instead more licensed respiratory therapists (Figure 1) occupying fewer staff therapist positions (Table 2) while vacant positions have grown (Table 1). It could be that therapists occupying job positions with descriptors like 'lead,' 'supervisor,' 'charge,' and 'coordinator' have been omitted from the 'staff therapist' FTE submissions in surveys. There are more FTEs occupied by therapists in education programs, which could account for some additional personnel. Respiratory therapists still maintaining a license are likely also occupying more positions in informatics, quality, and management within hospitals as well as in physician offices and clinics.

Graduations

We included the sizes of the education program populations and sample sizes in Table 3 because the supply of therapists entering the profession has been affected by the number of (1) programs and (2) graduates from a typical program.

Table 2 documented a decrease in budgeted positions for staff therapists over the last 10 years. An economic contraction occurred in 2020 with the COVID pandemic, but a full-employment-economy was underway in 2018 and 2019 so something else was already exerting a negative impact on the numbers of programs and graduates during those years. That trend has continued into more recent years, but respondents forecasted a return to pre-pandemic graduation rates next year.

Table 3. Trend in RRT-Eligible Graduates from Education Programs

Study	Year	Mean	Median
2014 Population N= 417 Sample N=254	2012	18.0	15
	2013	18.3	15
	2014	18.5	16
2020 Population N= 407 Sample N=212	2018	15.3	13
	2019	16.4	14
	2020	15.7	13
2024 Population N= 410 Sample N=165	2023	13.0	11
	2024	12.3	11
	2025	15.2	13

Finding a Job

When considering information in Table 1 and Table 3 together, programs have been graduating fewer therapists into job markets each year while vacant positions in hospitals have increased. Additionally, technical directors reported an increase in the average time needed to recruit respiratory therapists in the past fiscal year.

Compensation

Information collected from individual therapists about their total compensation in 2023 was used to produce a compensation calculator. Factors in the calculator were based on results of a procedure that incorporated multiple regression and analysis of covariance. These statistical techniques permitted evaluation of several factors considered together, which provided useful control over unexplained and overlapping sources of variance.

We have represented these results in a spreadsheet that was included with the report package. The spreadsheet provides opportunities to insert information about an individual that will yield a result based on the average associated with each factor that is entered. We expect that those who are responsible for hiring therapists will find the spreadsheet useful as a compensation benchmarking tool since (1) several factors have been incorporated into the model, (2) the factors have been documented to exert statistically significant effects, and (3) the coefficients in the model were informed by a large sample (N=3,966) of therapists.

Demographics

Gender

The respiratory therapy profession has been one that has involved a strong majority of women. The trend over the last 32 years that is described in Table 4 has been one that has generally seen an increase in the percentage of women in the population.

Table 4. Percentages of Therapists by Gender*

Year	Female	Male
1992	62	38
2000	64	36
2005	60	40
2009	62	38
2014	67	33
2020**	70	28
2024**	68	28

*Percentages were only based on those who responded to this question.
** The remaining respondents specified another option (e.g., transgender, non-binary) or preferred not to say.

Academic Achievement

The percentage of therapists without a college degree has shrunk in 32 years according to Table 5. The percentage of therapists who have achieved an associate degree has increased but seems to have plateaued at about 50% while the percentage earning a Baccalaureate degree has generally continued to increase.

Respiratory therapy technical directors indicated that, in general, increasing the percentage of baccalaureate-prepared therapists employed in their department was not a high priority which may be a factor in whether therapists pursue the degree. Refer to the report summarizing responses from acute care hospitals for details.

Table 5. Percentages by Academic Achievement*

Highest Academic Level Achieved	2024	2020	2014	2009	2005	2000	1992
No College	0.6	0.8	0.6	0.7	0.6	2.5	13.3
Some College	3.6	4.0	5.9	8.9	9.3	15.5	28.4
Associate	48.7	51.3	53.0	44.1	43.3	51.2	42.0
Baccalaureate	34.4	31.9	30.9	32.8	31.8	24.6	14.0
Masters	11.5	10.9	8.7	12.5	11.4	5.1	2.0
Doctorate	1.2	1.2	0.9	1.0	1.2	0.6	0.3

*Percentages were only based on those who responded to this question.

NBRC Credentials

In describing the 32-year trend, there were notably higher percentages of respiratory therapists who have achieved credentials in Table 6, especially when considering that fewer than half of therapists reported achieving either the CRT or RRT credentials in 1992. Since the mid-2000s, the percentages of the study samples that have achieved the RRT credential have been in the 80s.

It would be a mistake to assume that the level of RRT credentialing in the population was 86% in 2024. We know that hospital technical directors and those who teach in education programs were oversampled relative to the general population. Technical directors and educators were more likely to have achieved the RRT credential than the general population of therapists.

Table 6. Percentages of Responses by NBRC Credentials*

Credential	2024	2020	2014	2009	2005	2000	1992
CRT	46.2	51.7	60.5	69.3	67.3	73.5	37.9
RRT	85.8	82.8	80.2	85.3	80.9	68.5	36.9
AE-C	3.2						
RRT-ACCS	9.2	8.2	3.6				
CRT-NPS or RRT-NPS	13.8	14.2	13.8	16.8	14.8	9.0	
CRT-SDS or RRT-SDS	1.5	1.1	0.8	0.3			
CPFT	6.7	6.0	7.1	14.2	12.6	9.6	0.3
RPFT	4.3	3.0	3.0	6.1	5.8	3.7	0.3

*Because respondents could have earned more than one credential, these columns will not sum to 100%.
An empty cell indicates that survey respondents weren't asked about the credential during a given year.