AARC Human Resources Survey of Acute Care Hospital Employers

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SUMMARIES

Limitations of Study Results

There were 4,931 acute care hospitals with at least 25 beds at the time this study was done. The sample of 291 responses represented about 5% of the population, which means there is a large probability of nonresponse bias in these results. Hence, we urge caution in extrapolating these study results to hospitals that did not participate in the study.

Geographic Characteristics

Using a population of 100,000 as the threshold between rural and urban communities, 71% of responses came from respiratory care directors in rural hospitals. The proportion was similar in 2014 when 68% of 555 responses came from rural areas.

Critical Access Hospitals

These hospitals are located in rural settings at least 35 miles from another hospital while having 24-hour emergency services and no more than 25 beds. Among the 2020 respondents, 29.5% gave an affirmative response. In 2014, the proportion of affirmative responses was 18.5%.

Department Administration and Cost Centers

An overwhelming 90% of respondents represented what was considered a traditional centralized department although the proportion was decreased from 96% in 2014. Experiments with decentralized structures appear to have been largely abandoned from what we found in this study.

The typical respondent to this study was a technical director of respiratory care who was responsible for three cost centers in the hospital. The top three cost centers were (1) respiratory care, (2) pulmonary function testing, and (3) sleep medicine, which were rank-ordered the same way in 2014. Most of these departments had an administrative head who had a clinical background.

Studies of Responses about FTEs

A median value of 16 and a mean of 31 described typical 2020 responses about the total FTEs in a hospital department. In 2014, mean and median values were respectively 18 and 30. The mean and median values from Table 8 indicated that the typical respondent had between 1 and 2 vacant FTE for staff therapists.

Overtime Hours

Out of the total hours worked by therapists in these hospitals, 8% were overtime hours in this study. Respective overtime levels as a percentage of the total had been respectively 6% in 2014 and 14% in 2009.

Orientation Duration

The first thing that was notable about the duration of orientation was the very wide range of 12 to 1,200 hours. The distribution was positively skewed with a greater frequency of responses toward the lower end of the range. Still, there were plenty of hospitals with prolonged orientation periods. The typical period among these hospitals was 160 hours to 220 hours depending on whether one trusted the median or mean value more to indicate what was typical. Similar responses were given in 2014 with a maximum of 1,200 hours, a mean of 160 hours and a median of 205 hours.

Department Benchmarks and Productivity Measurements

Roughly one-half of respondents indicated that they were required to benchmark productivity or quality measurements against departments of comparable hospitals, which was unchanged from 2014. Almost three quarters of respondents indicated that they measured the productivity of respiratory therapists in 2020 compared to 54% in 2014. Procedure counts and charges remain the most common metrics among those that used such measurements in 2014 and 2020.

Protocol Uses

Of those who responded to the question, 43% had incorporated protocols into delivery of respiratory care; this proportion was 52% in 2014. Of those that used protocols, most used protocols related to oxygen therapy and mechanical ventilation.

Medical Direction

Among responses submitted in 2020, 52% indicated that a medical director had been designated for their departments. In 2014, 61% had indicated that a medical director had been designated.

Expectations Regarding Additional Certifications (e.g., intubation, ACLS)

Among the 2020 respondents, 22% reported that respiratory therapists who had earned additional certifications were given additional clinical responsibilities. In 2014, 23% had given an affirmative response. The percentage of respondents indicating that therapists who earned additional certifications were compensated more was 11% in 2014 and 11% in 2020.

Turnover and Retention

When asked to compare turnover to the previous fiscal year, 54% of the 2020 respondents indicated that the rate was the same while 39% cited an increase. In 2014, 64% had seen the same turnover while 18% had seen an increase. The time needed to recruit respiratory therapists had increased according to two thirds of 2020 respondents who responded to the question while 58% had cited increased time to needed to recruit in 2014.

The most widely used retention incentive among these hospitals has been and continues to be reimbursement of tuition. This was the only incentive offered by more than one-half of these hospitals. The availability of benefits was communicated in orientation materials and by regular email communications from the Human Resources department in a majority of facilities.

Hours of Operation

Most (78%) of the 2020 respondents worked for hospitals in which respiratory care was a service that was provided for 17 to 24 hours. In 2014, 86% of respondents answered this question the same way.

Work Prioritization

Approximately 73% of the 2020 respondents indicated that their hospitals gave respiratory therapists tools to prioritize work assignments when there was not time to complete all tasks within a shift. In 2014, 69% of the sample gave affirmative responses.

Department Services

Although the 2020 respondents indicated that respiratory therapists sample arterial blood in practically all (91%) of these hospitals, only 67% of respondents reported that therapists analyzed the blood gas analysis results. In 2014, these percentages were respectively 92% and 68%. The mix of other services varied across facilities.

Study of Credentials and Degree Preparedness

At most, 39% of the 2020 respondents indicated that their departments were exclusively staffed with therapists who had achieved the RRT credential. In 2014, 38% of the sample gave an affirmative response. However, if omitted responses were an indication of a negative response, then the percentage could have been as low as 22% in 2020 and 24% in 2014.

Increasing the proportion of baccalaureate-prepared therapists tended to be a low priority among respondents with a mode of 0% and a mean of 35% as an indication of the degree to which this was a department goal in 2020. This was a new question so there was no comparison to be made to 2014.

Nearly 60% of 2020 respondents indicated that therapists who worked for them and who were eligible for the RRT credential were given a time limit to achieve the RRT. Again, if omitted responses were an indication of a negative response, the percentage could have been as low as 33% in 2020. In 2014, comparative percentages were 58% and 37% for the low estimate after accounting for missing responses.

Most of the 2020 respondents (about 80%) indicated that therapists with CRT and RRT credentials were given the same work assignments in their hospitals. In 2014, 82% gave the same response.

Average Hourly Wages

Analyses of wage differences were limited since technical directors were asked to extrapolate the average of wages paid to groups of respiratory therapists in different job positions. While these results revealed important factors that exerted effects on compensation within these acute care hospitals, more detailed analyses will be done in the study of responses from individual therapists. We encourage those who are interested in compensation factors to refer to the report summarizing responses from individual therapists.

INTRODUCTION

The American Association for Respiratory Care (AARC), as the professional membership organization for respiratory therapists, has periodically conducted human resource studies of therapists and institutions that employ therapists. Acute care hospitals are one such employer of a substantial proportion of respiratory therapists. The AARC prepared a survey with the intent that directors of respiratory therapy departments within these hospitals would respond.

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

The Results section follows the order of questions as presented in the survey. Contents of the survey are presented in Appendix A.

METHODS

A survey of this population was completed in 2014, so the instrument from that study was the starting point for development of a survey for this study. AARC Associate Executive Director, Shawna Strickland, PhD, RRT, RRT-NPS, RRT-ACCS, AE-C, FAARC revised and added questions to bring the instrument to its final form after consulting with stakeholders.

Survey sampling began with a listing of 4,931 acute care hospitals that were accredited for 25 beds or more. Contents of an invitation postcard are shown in Appendix B. Each postcard was addressed to the attention of the "Director/Manager of Respiratory Care." Those who chose to participate were directed to the online survey. The survey was available to respondents from September 1, 2020 through October 11, 2020. An email reminder was sent to 2,736 AARC members who self-identified as managers in their AARC profile.

Responses are summarized in the Results section of this report. The IBM SPSS Statistics Subscription version 1.0.0.1406 software package was used to analyze survey responses for this study.

RESULTS

Two hundred ninety-one (291) directors responded in time to have their responses included in analysis. Three postcards were returned due to inaccurate addresses. An exact response rate could not be calculated because of overlap between the postcard list and email list. The estimated proportion of the population of acute care hospitals from which a response was received was 5%.

Geographic Groupings

Geographic information was collected from respondents by a survey question that asked for the zip code of the organization in which respiratory care services were provided. Zip code information was recoded to identify the state for each set of responses. Forty-six states and the District of Columbia were represented by at least one respondent. There were no responses from the states of Hawaii, Idaho, Nevada, or Vermont.

Figure 1 plus Table 40 in Appendix C describe the number of hospitals from each state. Kansas, Ohio, Pennsylvania, and New York were the top four states in survey participation.

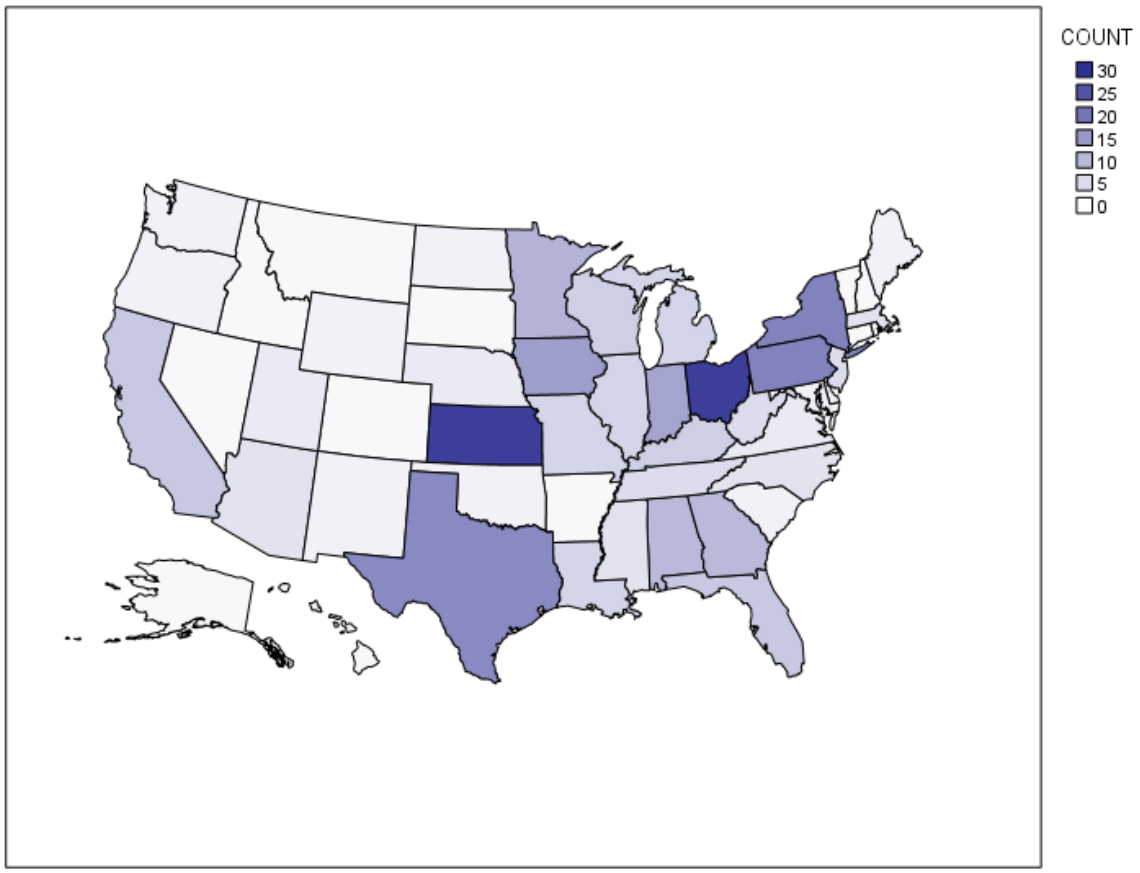


Figure 1. Distribution of respondents by state

Figure 2 (Table 41 in Appendix C) grouped states by four regions while Figure 3 (Table 42 in Appendix C) organized them by nine census divisions.

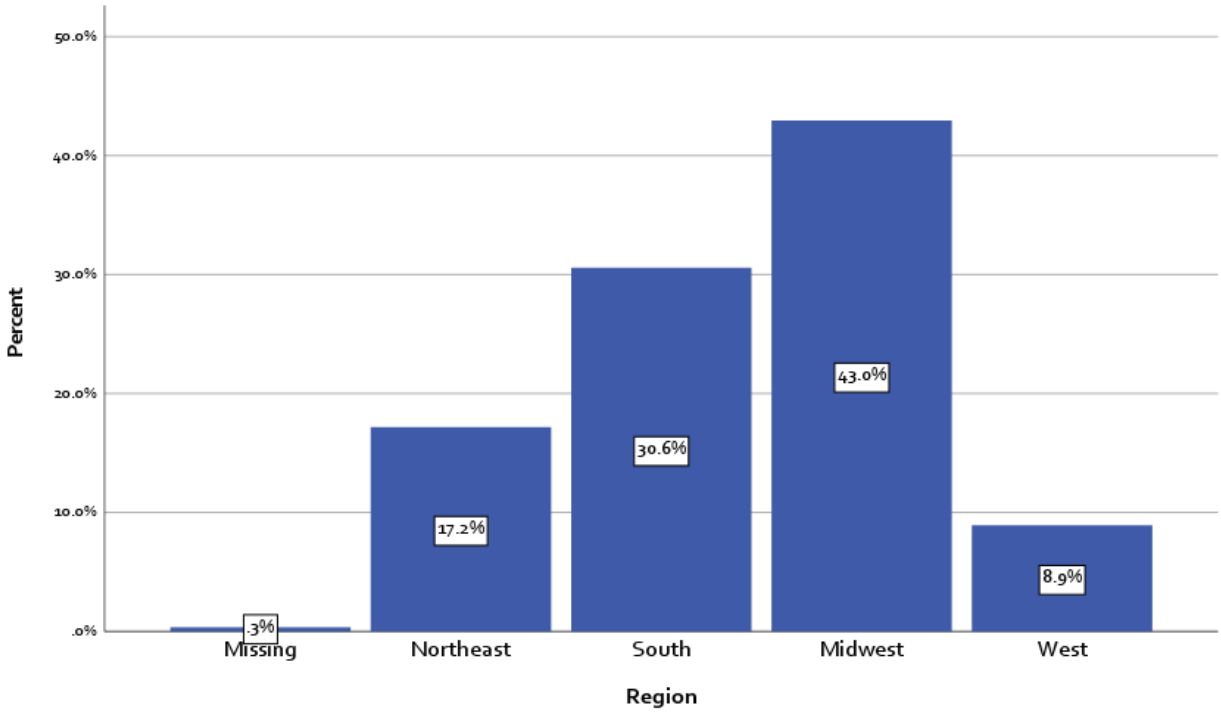


Figure 2. Distribution of respondents by region

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

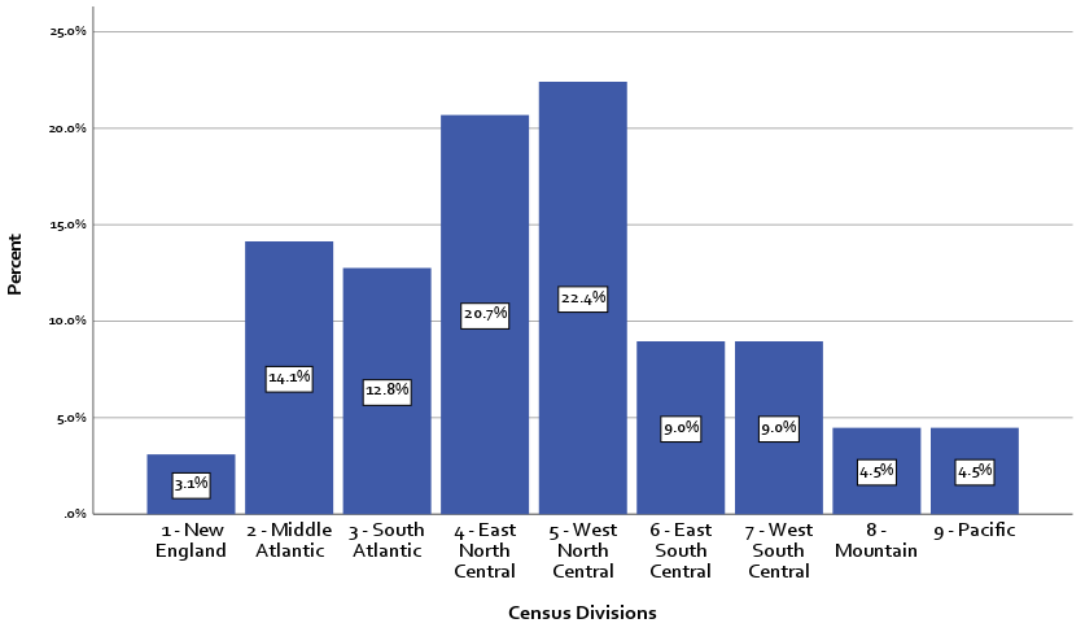


Figure 3. Distribution of respondents by census division

*Divisions from US Census Bureau:
1: New England– MA, RI, NH, ME, VT, CT;
2: Middle Atlantic– NJ, NY, PA;
3: South Atlantic– DE, DC, MD, VA, WV, NC, SC, GA, FL;
4: East North Central– OH, IN, MI, WI, IL;
5: West North Central – IA, MN, SD, ND, MO, KS, NE;
6: East South Central – AL, TN, MS, KY;
7: West South Central – LA, AR, OK, TX;
8: Mountain – MT, CO, WY, ID, UT, AZ, NM, NV;
9: Pacific – CA, HI, OR, WA, AK

Using a population of 100,000 as the threshold between rural and urban communities, approximately seven out of every ten respondents worked at hospitals located in rural settings according to Figure 4. Frequencies can be found in Appendix C, Table 43.

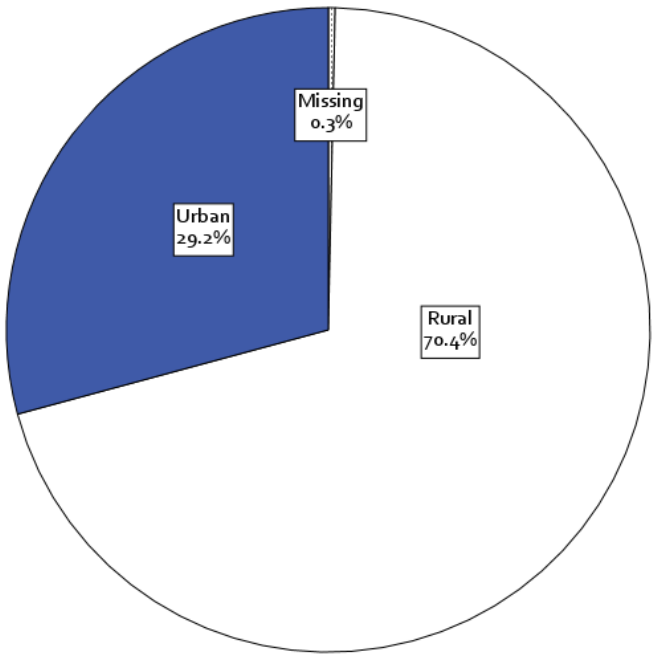


Figure 4. Distribution of urban and rural facilities

Critical Access Hospitals

1. Is this facility designated as a Critical Access Hospital by CMS?

The valid percentage of "Yes" responses was 29.6%. Because the CMS criteria are strict for designation as a critical access hospital, this set of responses appeared to reflect the low percentage that was expected.

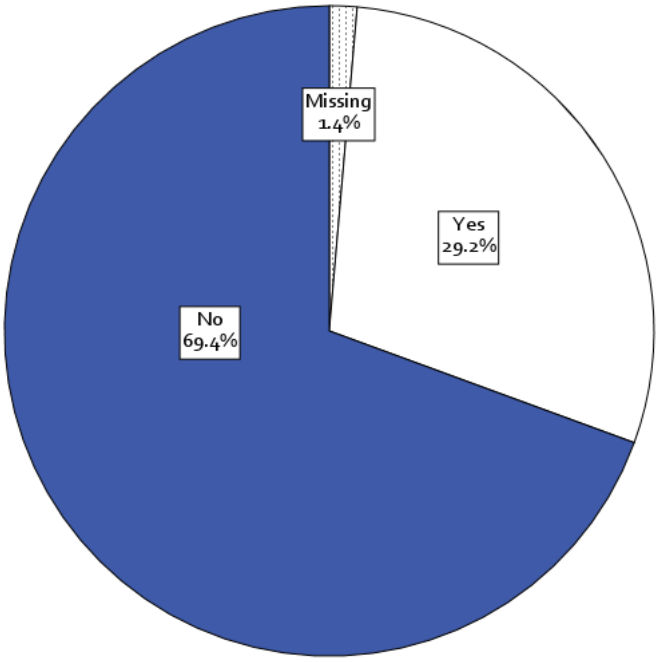


Figure 5. Distribution of Critical Access Hospitals

Cost Centers

2. For how many cost centers is the Respiratory Therapy Manager responsible?

According to Table 1, the typical manager of respiratory therapy was responsible for three cost centers within the hospital.

Table 1. Number of Cost Centers for which the Respiratory Therapy Manager is responsible

N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
Valid	Missing						
279	12	3.30	.165	3	2.76	0	20

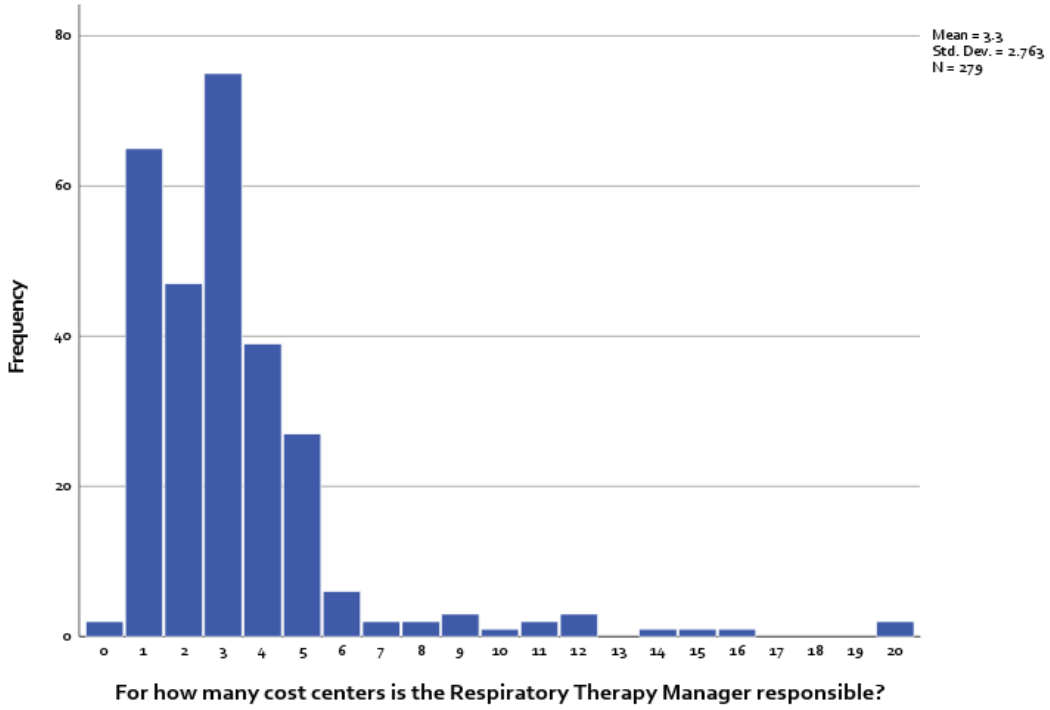


Figure 6. Number of Cost Centers for which the Respiratory Therapy Manager is responsible

Departments for which the Respiratory Care Manager is Responsible

3. **Please indicate the departments for which the Respiratory Care Manager is responsible. *Select all that apply.***

Respondents were asked to specify each department for which the Respiratory Care Manager was responsible. Virtually every manager was responsible for respiratory care. Nearly three-fourths of managers were responsible for the pulmonary function lab. Hence, (1) respiratory care and (2) the pulmonary function lab were the typical departments for which managers were responsible. A little more than one third of these respondents were responsible for sleep services while slightly less than one third were responsible for pulmonary rehabilitation. Additional descriptors (ABG Lab, Diagnostic Cardiology, Diagnostic Cardiology and Neurology, Hyperbaric Therapy, DME, Clinic) were created based on clusters of free text provided after a respondent had selected the 'Other' response. Other departments listed by survey respondents are described in Appendix D.

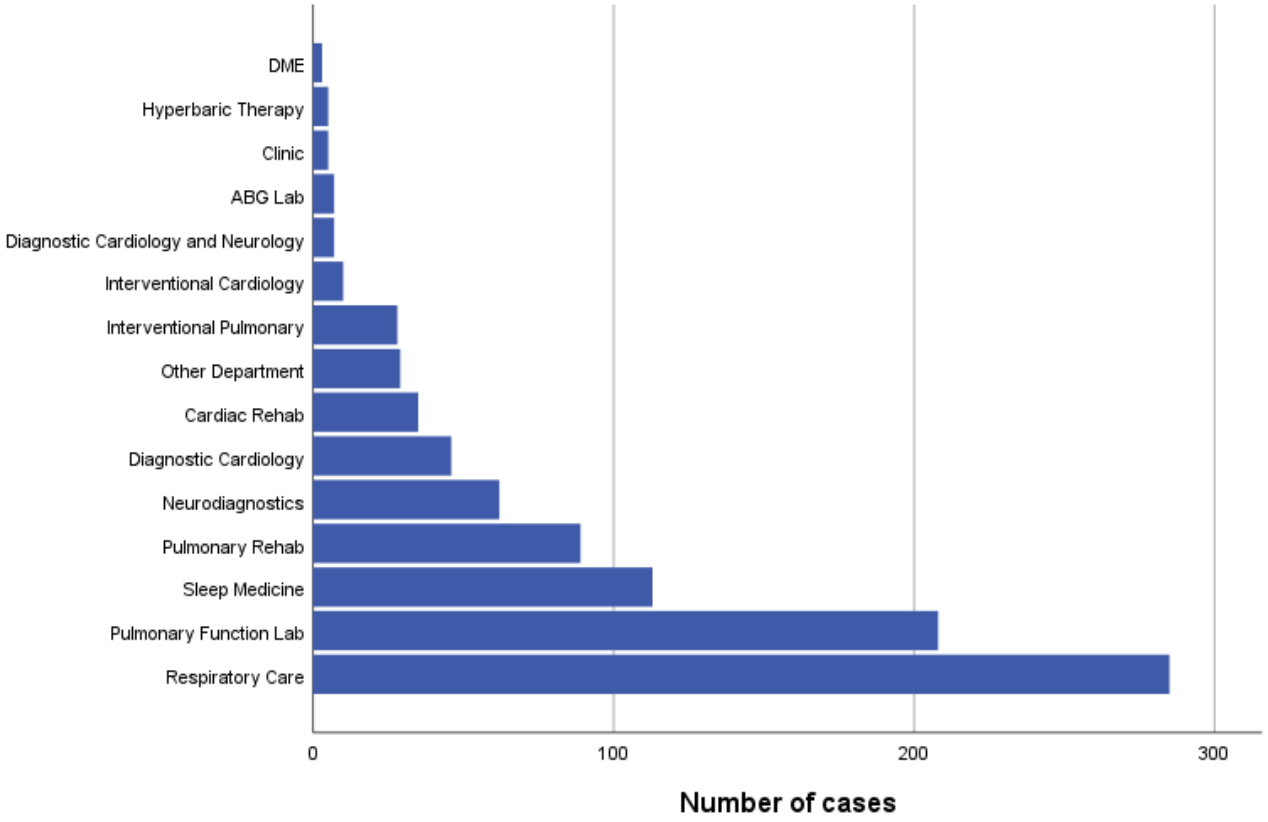


Figure 7. Departments for which the Respiratory Care Manager is Responsible

FTE Positions

4. **What is the total number of FTEs employed in both therapist or other positions, for which the Respiratory Therapy Department Director is responsible?**

Figure 8 showed a skewed distribution, so the mean value in Table 2 was pulled up toward the extremely high responses. One would usually gravitate toward the median value to describe what was typical, but the wide range plus the skewed distribution of values discourages that approach to this distribution.

Table 2. Number of FTEs for which the Department Director is responsible

N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
Valid	Missing						
228	63	30.79	2.40	16	36.22	.40	165.20

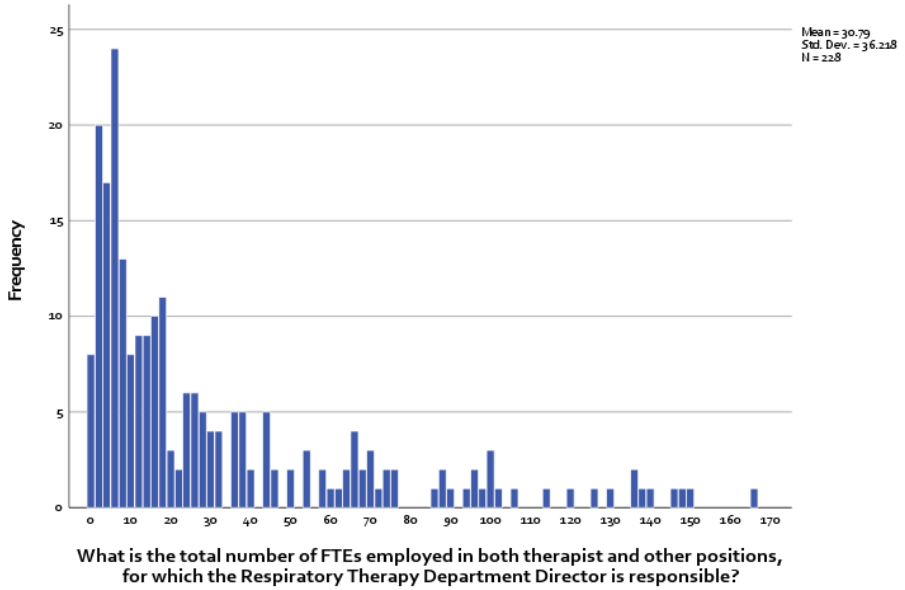


Figure 8. Total FTEs for which the Director is responsible

5. How many FTEs does your organization budget or contract for <u>Staff Therapist</u> positions held by respiratory therapists *this fiscal year*?

Projecting the population of staff therapists in acute care hospitals was complicated by the fact that 67 people gave no response to this survey item. An important question was why they would behave this way. Speculating that at least some of them had no staff therapists and they skipped this item since they did not find that it applied to their circumstances, we produced a more conservative estimate in the second row of Table 3.

Table 3. Estimates of FTEs budgeted for Staff Therapist positions

N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
Valid	Missing						
224	67	25.52	2.22	11.73	33.21	0	180
291*	0	19.64	1.92	6.00	31.05	0	180

*Missing responses were converted to zero values under the expectation that at least some of these respondents skipped the question rather than enter a value of zero. Doing so produced a more conservative population estimate.

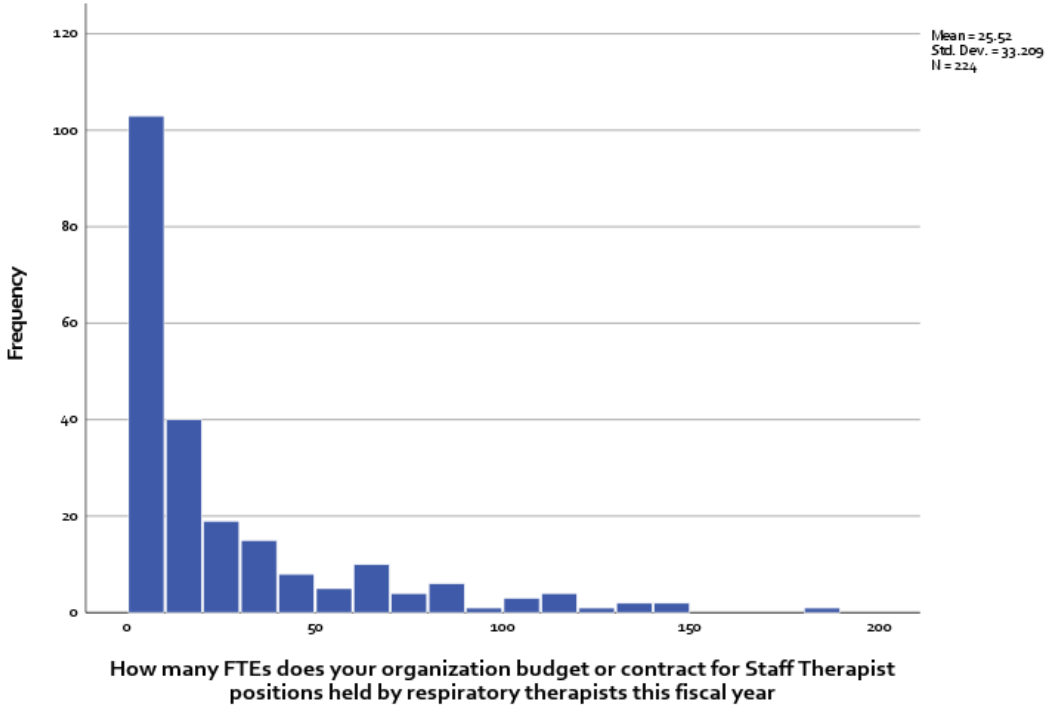


Figure 9. FTEs the organization budgeted for therapist positions this fiscal year

6. How many FTEs does your organization budget or contract for in each of the following job titles held by respiratory therapists this fiscal year?

Table 4 revealed substantial numbers of missing responses for some of these positions. The tendency to overestimate the population was made clearer by focusing on the Director / Manager row in Table 4. Typically, a respiratory care department had 1 person in charge of the operation. Yet the mean value exceeded 1. Therefore, the more conservative set of estimations in Table 5 were likely closer to the truth for each of these positions.

Respondents were given the following descriptions in the survey for job positions listed throughout this report:

- Director/Manager is defined as a respiratory therapist who is the top manager of this department
- Supervisor is defined as a respiratory therapist other than the director who evaluates the performance of other employees
- Non-supervisory, management support staff who are respiratory therapists, but are not included in other titles (e.g., clinical specialist, research coordinator)
- Sleep Technologist/Specialist
- Pulmonary Function Technologist
- Other diagnostic technologist (e.g., noninvasive cardiology)
- Department Educator is defined as the person who coordinates continuing education and staff development
- Disease Manager/Patient Educator

Table 4. First estimates of total budgeted FTEs in 2020 by position

	N*		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
	Valid	Missing						
Director/Manager	211	80	1.05	.04	1	.51	0	4
Supervisor	189	102	1.73	.18	1	2.47	0	18
RT Support Staff	183	108	3.40	.46	1	6.17	0	40
Sleep Tech/Spec	146	145	1.84	.28	0	3.36	0	20
Pulm Function Tech	167	124	1.24	.13	1	1.67	0	9
Diagnostic Tech	128	163	.78	.17	0	1.90	0	12
Department Educator	143	148	.36	.06	0	.70	0	6
Disease Mgr/Pt Educator	128	163	.27	.05	0	.59	0	3

*Extreme cases of 20, 37, 39 for Director/Manager, 40 for Supervisor, 40 for Sleep Tech, 36 for Diagnostic Technician, and 36 for Department Educator were removed from analysis.

*Table 5. Conservative estimates of total budgeted FTEs in 2020 by position**

	N**		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
	Valid	Missing						
Director/Manager	288	3	.77	.04	1	.64	0	4
Supervisor	290	1	1.13	.13	0	2.15	0	18
RT Support Staff	291	0	2.14	.30	0	5.16	0	40
Sleep Tech/Spec	290	1	.92	.15	0	2.55	0	20
Pulm Function Tech	291	0	.71	.08	0	1.41	0	9
Diagnostic Tech	290	1	.34	.08	0	1.32	0	12
Department Educator	290	1	.18	.03	0	.52	0	6
Disease Mgr/Pt Educator	291	0	.1172	.02	0	.41	0	3

*Missing responses were converted to zero values under the expectation that at least some of these respondents skipped the question rather than enter a value of zero. Doing so produced a more conservative population estimate.
**Extreme cases of 20, 37, 39 for Director/Manager, 40 for Supervisor, 40 for Sleep Tech, 36 for Diagnostic Technician, and 36 for Department Educator were removed from analysis

Figure 10 shows that most respondents reported one director position occupied by a respiratory therapist.

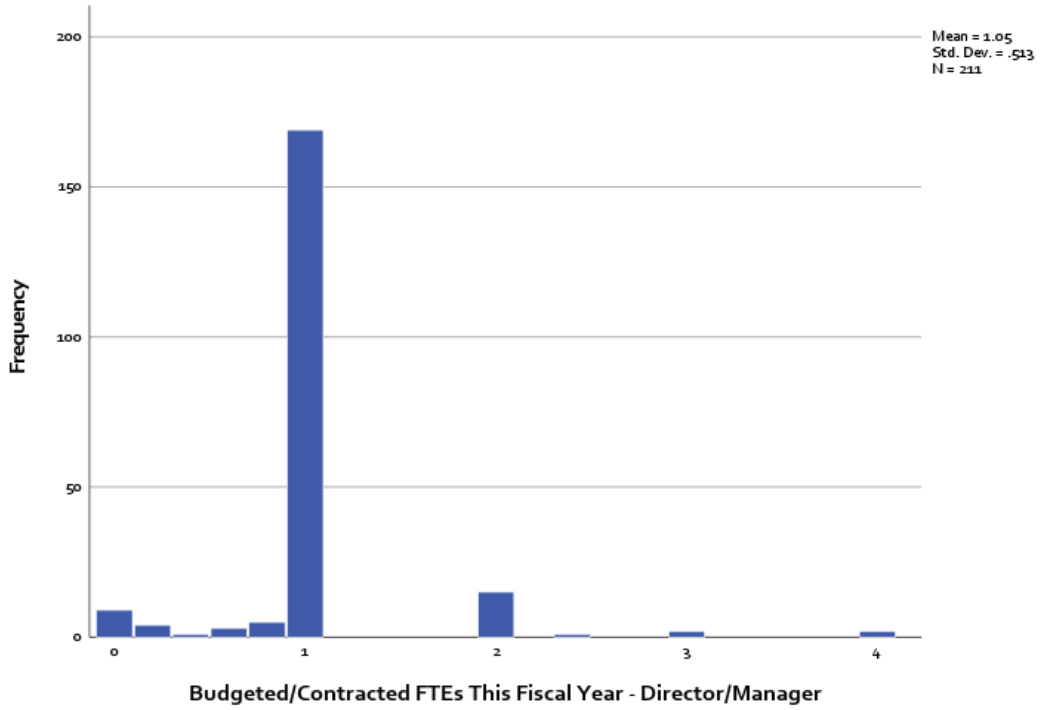


Figure 10. Director/Manager FTEs

According to *Figure 11*, a hospital that had more than zero respiratory therapists in supervisor positions tended to have two to three therapists in such positions.

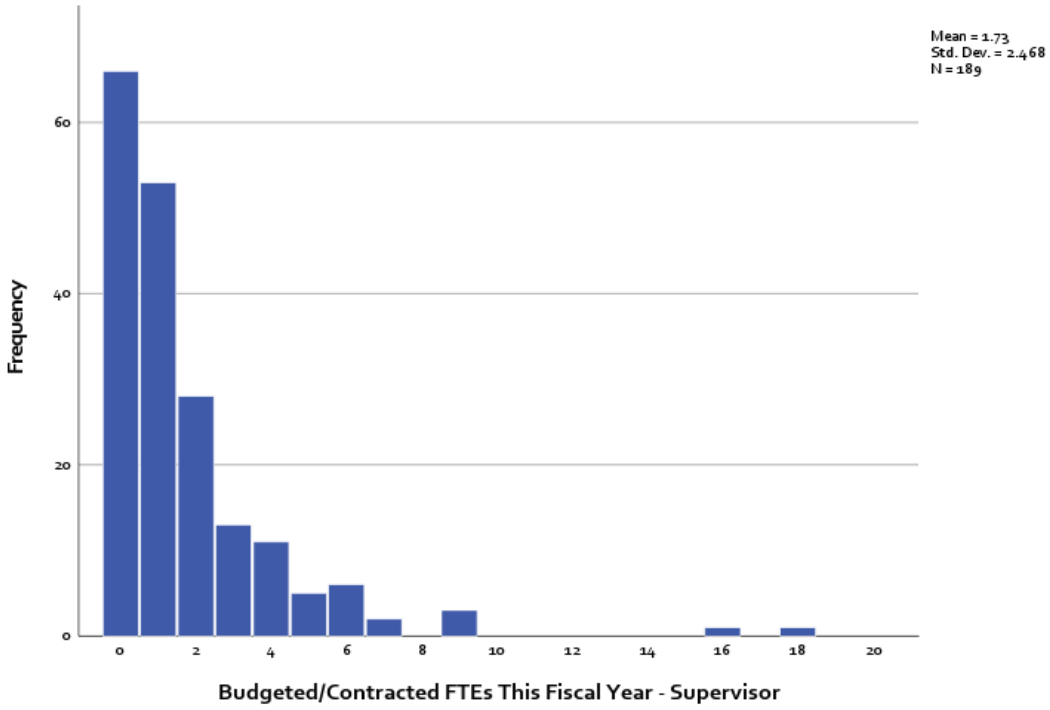


Figure 11. Supervisor FTEs

Most respondents reported having fewer than five positions occupied by respiratory therapists for non-supervisory support according to *Figure 12*.

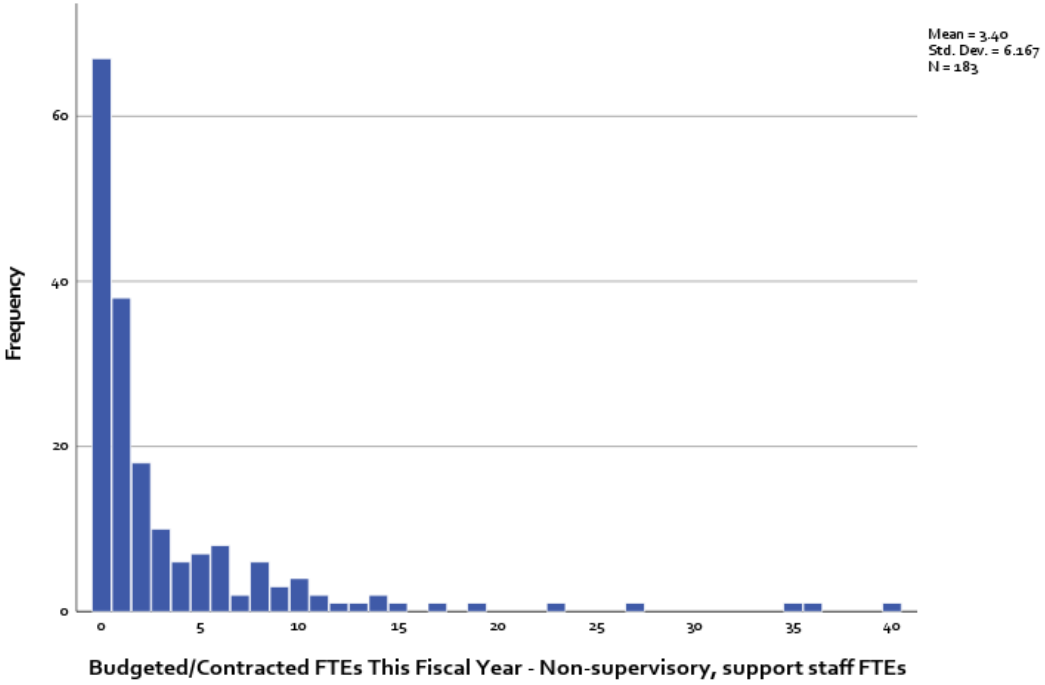


Figure 12. Support FTEs

Most respondents reported eight or fewer positions occupied by respiratory therapists for sleep technologists or specialists as *Figure 13* shows.

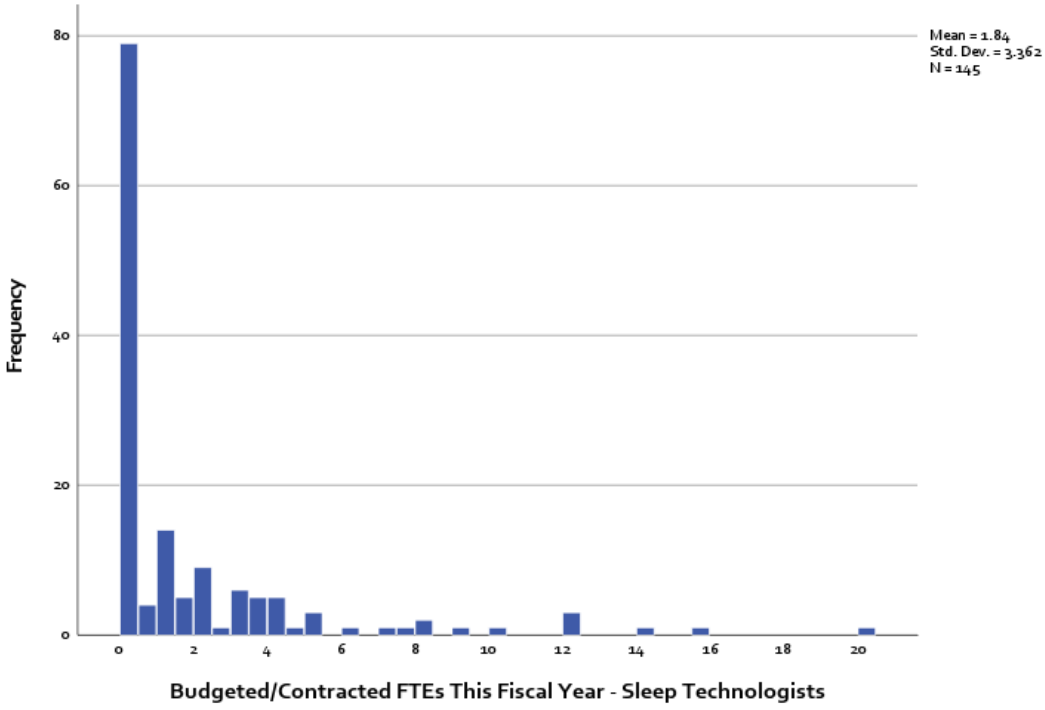


Figure 13. Sleep Technologist FTEs

According to *Figure 14*, most respondents reported having zero positions or one position for pulmonary function technologists.

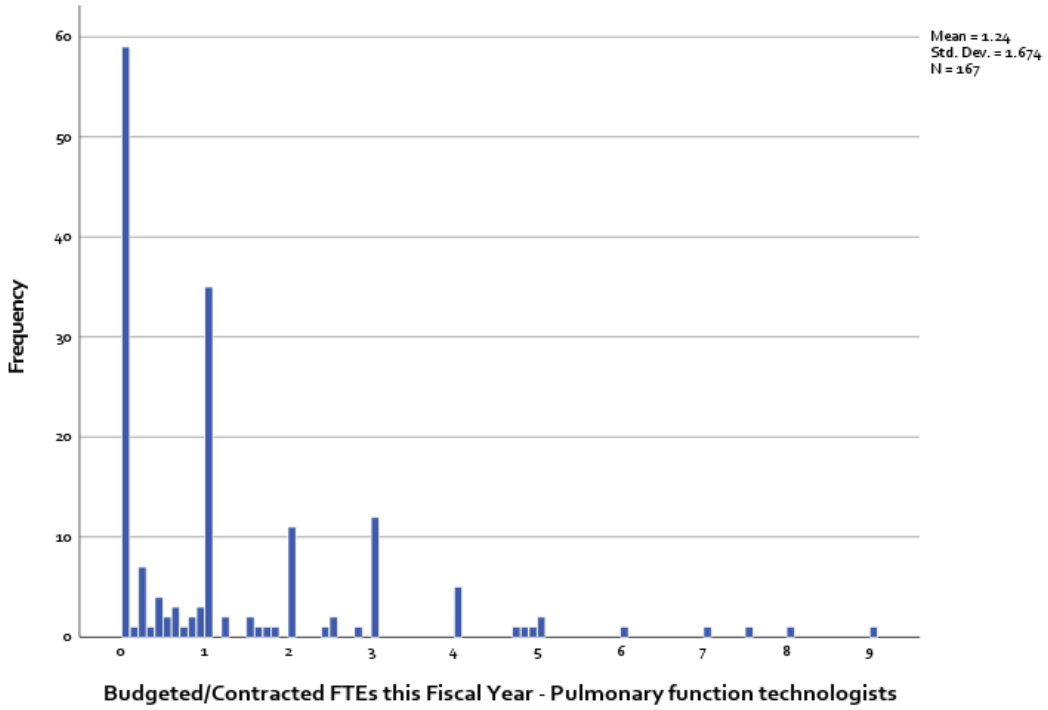


Figure 14. Pulmonary Function Technologist FTEs

Most respondents reported zero positions occupied by respiratory therapists for other diagnostic technologists as *Figure 15* shows.

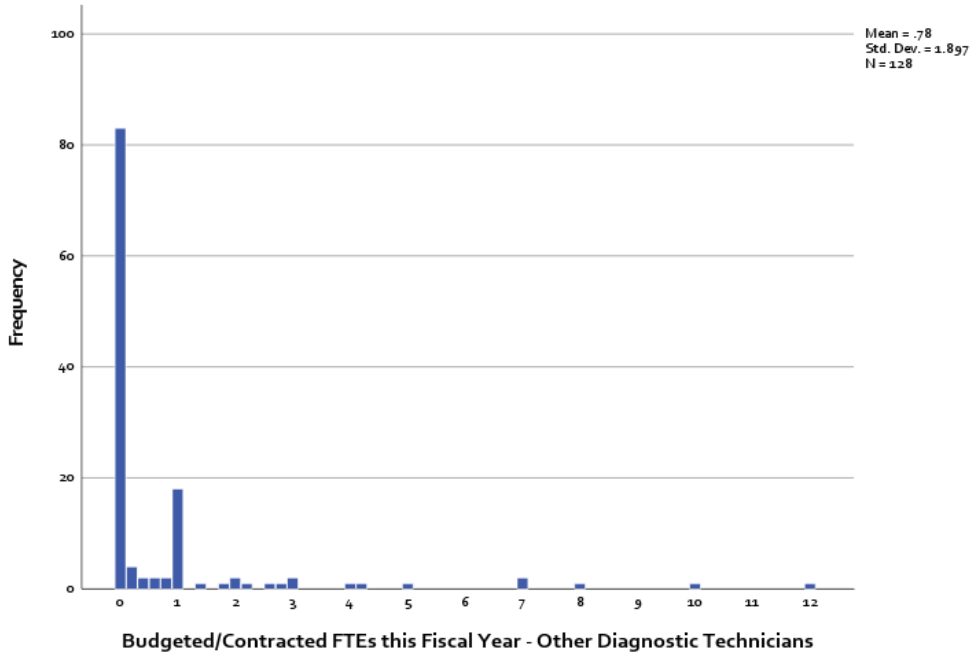


Figure 15. Other Diagnostic FTEs

According to *Figures 16* and *17,* most respondents reported that they did not employ respiratory therapists in department educator or disease manager/patient educator positions. Among the hospitals that did, there tended to be one FTE.

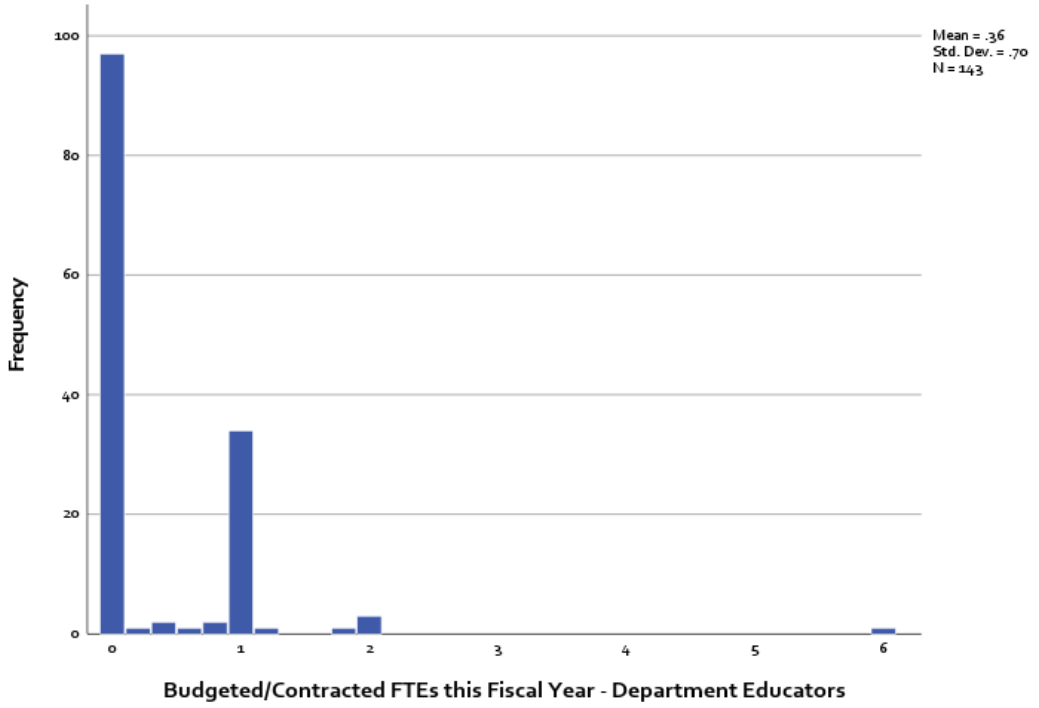


Figure 16. Department Educator FTEs

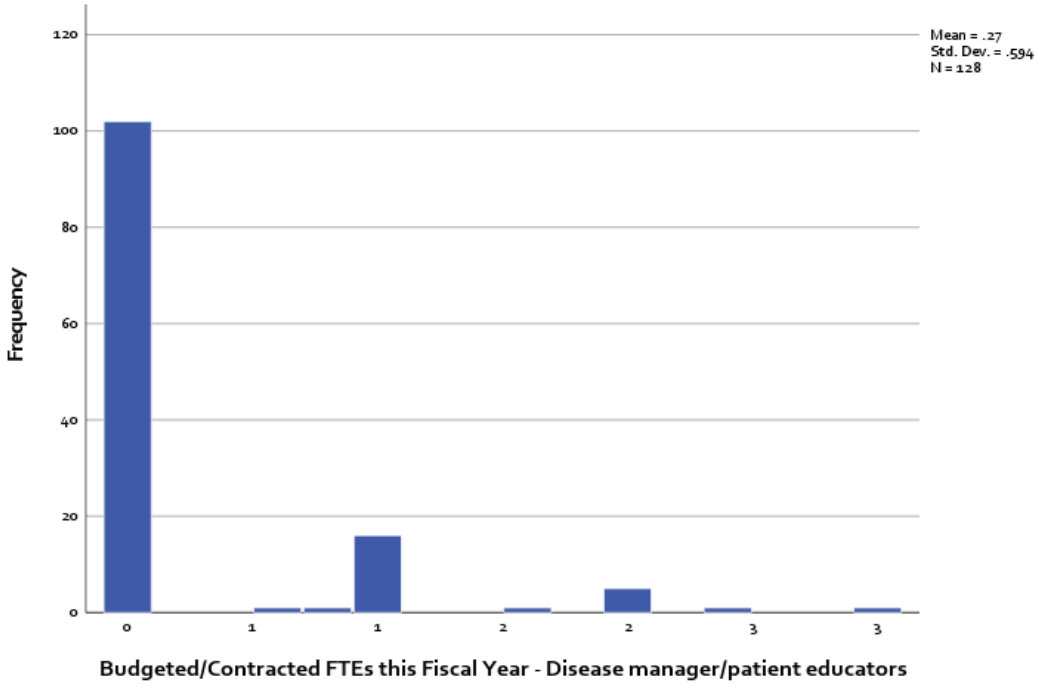


Figure 17. Disease Manager/Patient Educator FTEs

7. **How many FTE positions held by respiratory therapists did the organization typically supplement from non-employee pools, or from outside temporary agencies this fiscal year for staff therapists?**

Although many respondents reported that they did supplement FTEs from non-employee pools, they required coverage for far less than one FTE as Table 6 and *Figure 18* showed. A more conservative estimate is offered in the second row of Table 6.

Table 6. First and conservative estimates of supplemental FTE staff therapists

N							
Valid	Missing	Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
215	76	.92	.136	0	2.00	0	10
291*	0	.68	.103	0	1.76	0	15

*Extreme responses of 30.0, 22.0, and 20.0 were excluded from analysis

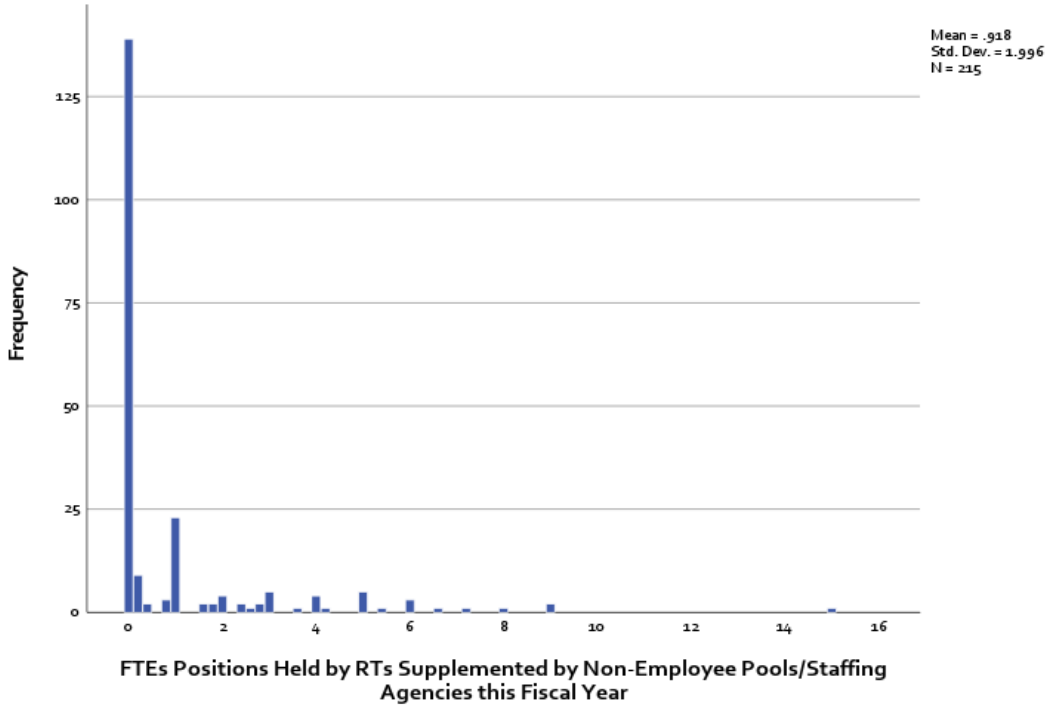


Figure 18. Supplemental Staff Therapist FTEs

8. How many FTEs to be held by respiratory therapists does the organization currently have vacant for Staff Therapists?

The typical respondent who reported having a vacant position had 1 or 2 such positions at the time that survey responses were collected. Otherwise, the typical respondent did not have any vacant positions. As before, at least some of the 75 missing responses likely did not have vacant positions and so they skipped the item rather than enter a value of zero. A more conservative estimate is offered in the second row of Table 7.

Table 7. Estimates of total vacant FTEs in 2020 for Staff Therapists

N*							
Valid	Missing	Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
216	75	1.93	.188	1.00	2.76	0	16
288**	3	1.45	.149	.40	2.53	0	16

*Extreme cases of 20, 22, and 30 were removed from analysis.
**Missing responses were converted to zero values under the expectation that at least some of these respondents skipped the question rather than enter a value of zero. Doing so produced a more conservative population estimate.

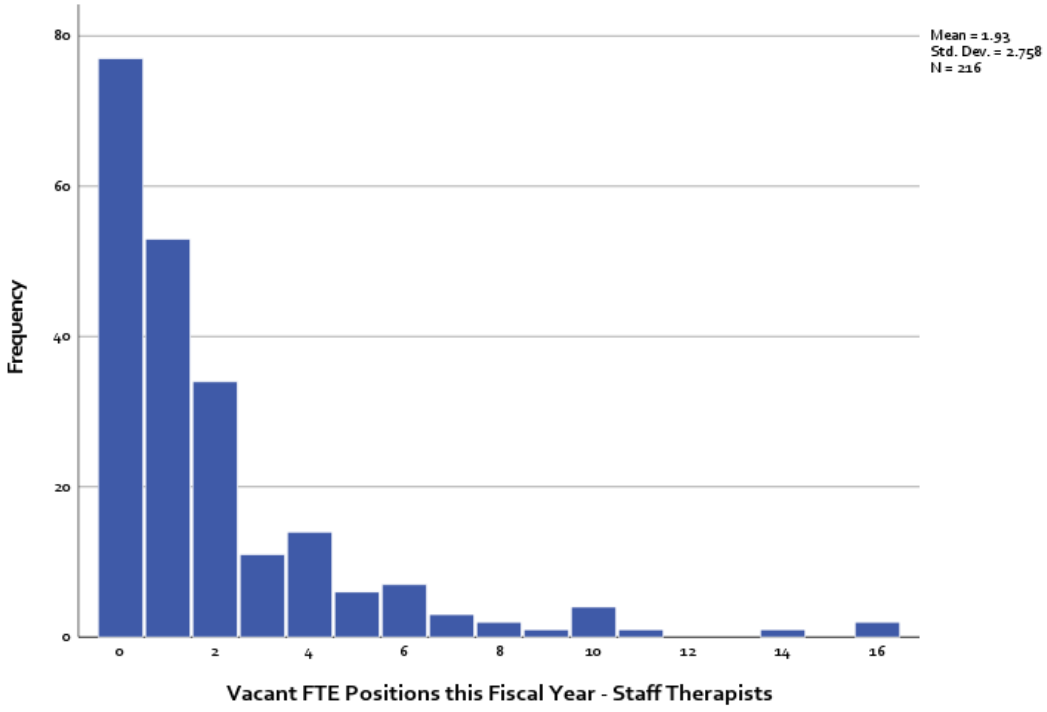


Figure 19. Total Vacant FTEs in 2020 for Staff Therapists

9. How many FTEs to be held by respiratory therapists does the organization currently have vacant for the following job titles?

Compared to the staff therapist position, vacancies among these other job positions were scarce. Most hospitals had no vacancies among other positions as evidenced by median values of zero and mean values that were close to zero for each position as summarized in Table 8. Foreshadowing a bit about compensation, respiratory therapists in most of these job positions were compensated more than those in the staff therapist position.

Table 8. First estimates of total vacant FTEs in 2020 by position

	N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
	Valid	Missing						
Staff Therapist	216	75	1.93	.19	1	2.76	0	16
Director/Manager	178	113	.03	.01	0	.15	0	1
Supervisor	179	112	.06	.02	0	.30	0	2
RT Support Staff	193	98	.46	.08	0	1.14	0	11
Sleep Tech/Specialist	167	124	.09	.03	0	.34	0	2
Pulm Function Tech	170	121	.06	.03	0	.38	0	4
Diagnostic Tech	167	124	.02	.01	0	.18	0	2
Department Educator	170	121	.03	.02	0	.25	0	3
Disease Mgr/Patient Educator	166	125	.01	.01	0	.11	0	1

Table 9. Conservative estimates of total vacant FTEs in 2020 by position

	N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
	Valid	Missing						
Director/Manager	291	0	.02	.01	0	.12	0	1
Supervisor	291	0	.03	.01	0	.24	0	2
RT Support Staff	291	0	.30	.06	0	.95	0	11
Sleep Tech/Specialist	291	0	.05	.02	0	.26	0	2
Pulm Function Tech	291	0	.04	.02	0	.29	0	4
Diagnostic Tech	291	0	.01	.01	0	.13	0	2
Department Educator	291	0	.02	.01	0	.19	0	3
Disease Mgr/Patient Educator	291	0	.01	.01	0	.08	0	1

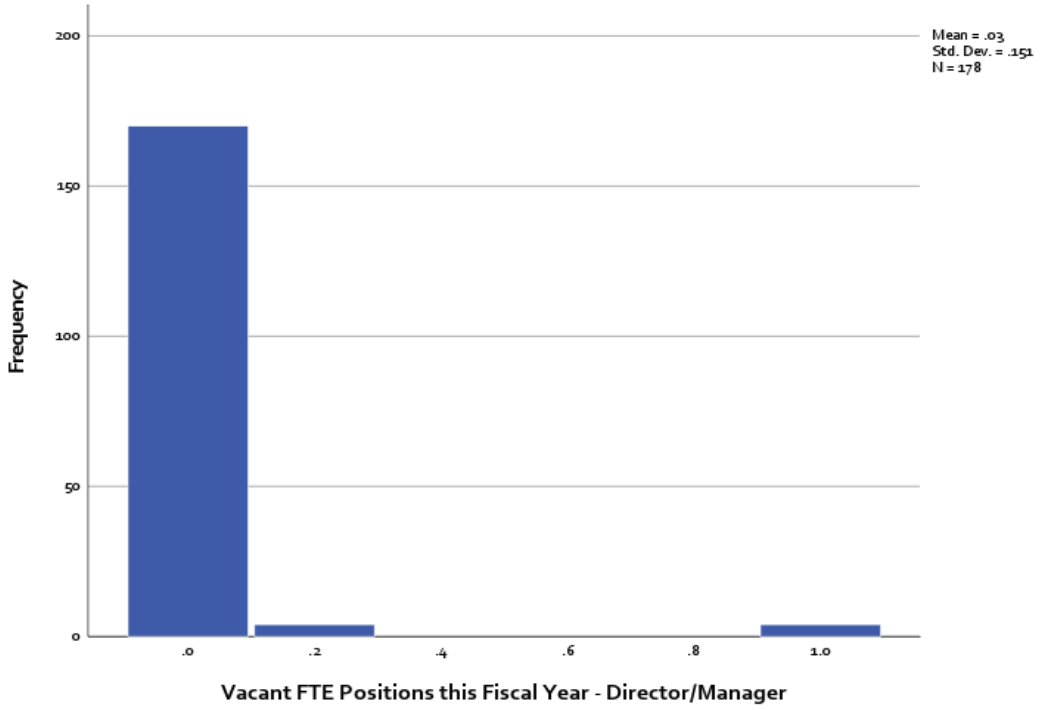


Figure 20. Total Vacant FTEs in 2020 for Directors/Managers

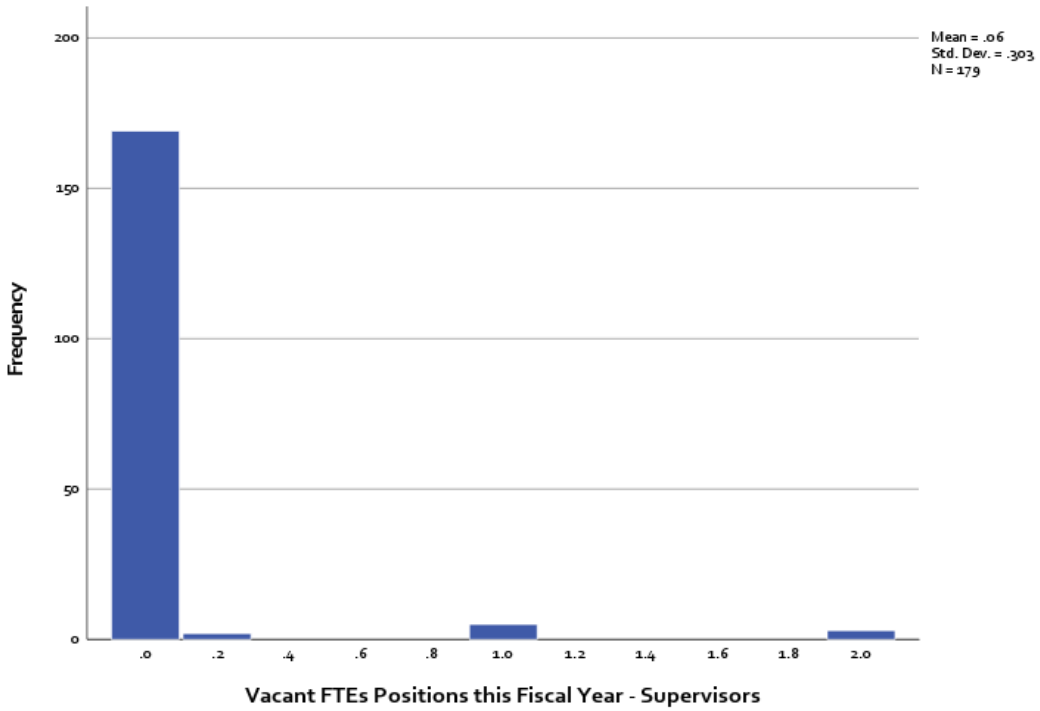


Figure 21. Total Vacant FTEs in 2020 for Supervisors

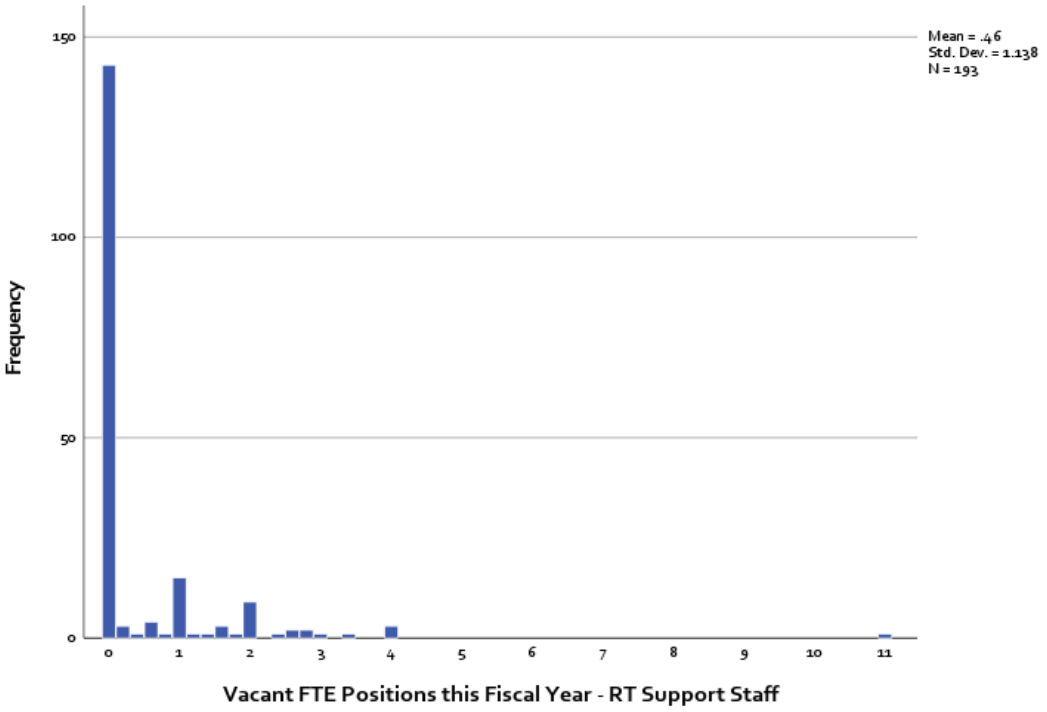


Figure 22. Total Vacant FTEs in 2020 for RT Support Staff

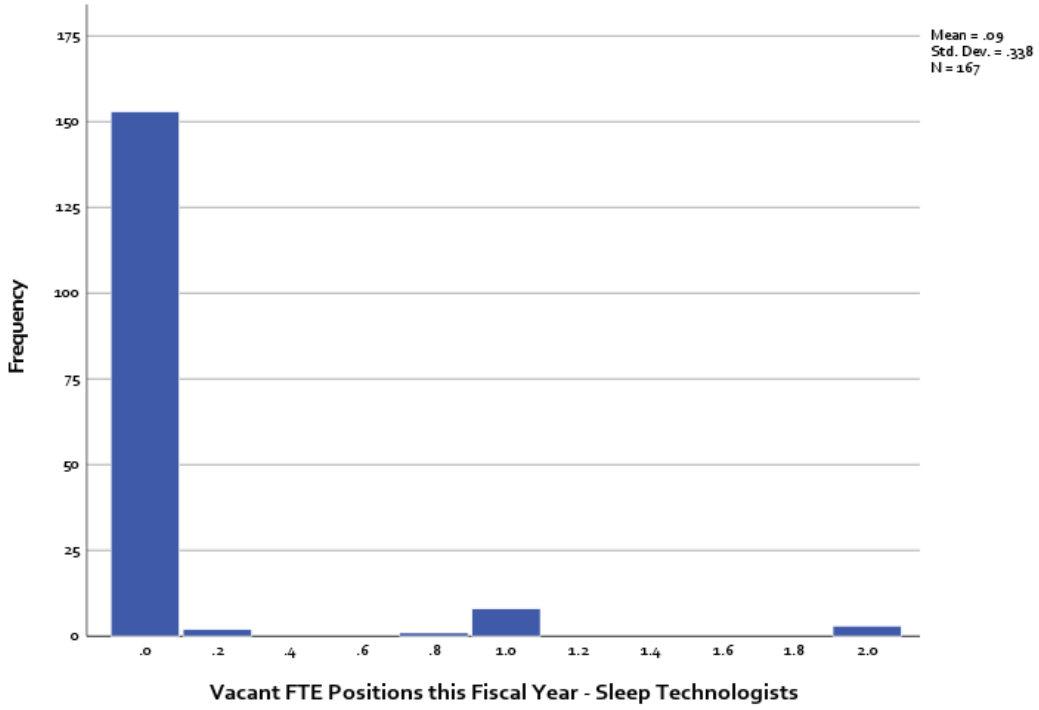


Figure 23. Total Vacant FTEs in 2020 for Sleep Technologists

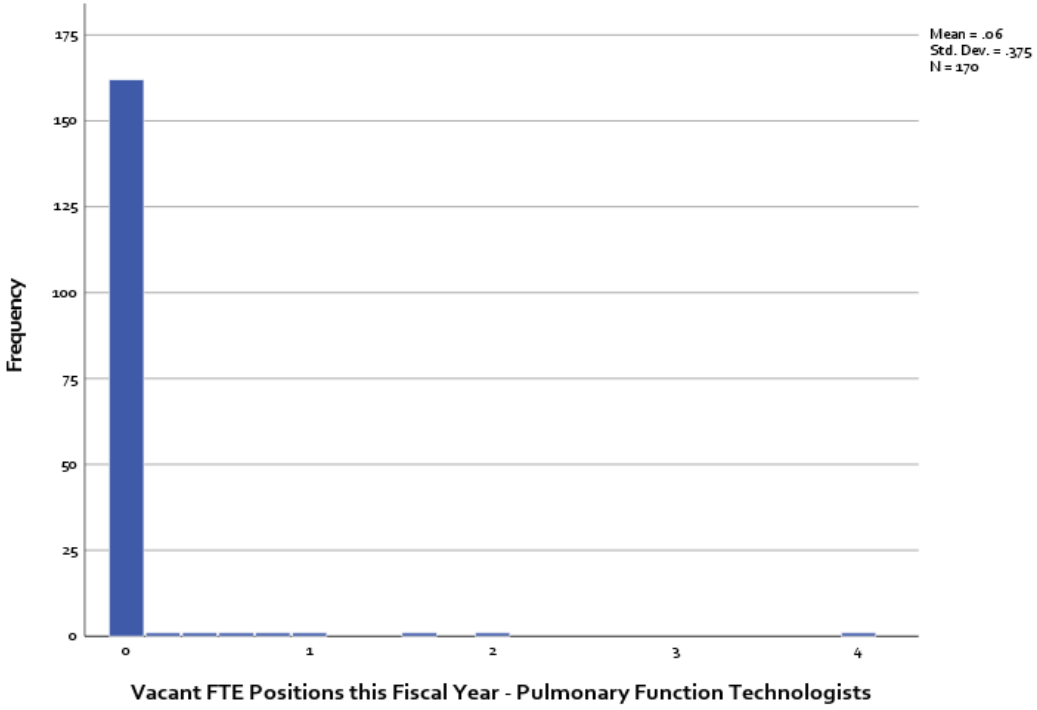


Figure 24. Total Vacant FTEs in 2020 for Pulmonary Function Technologists

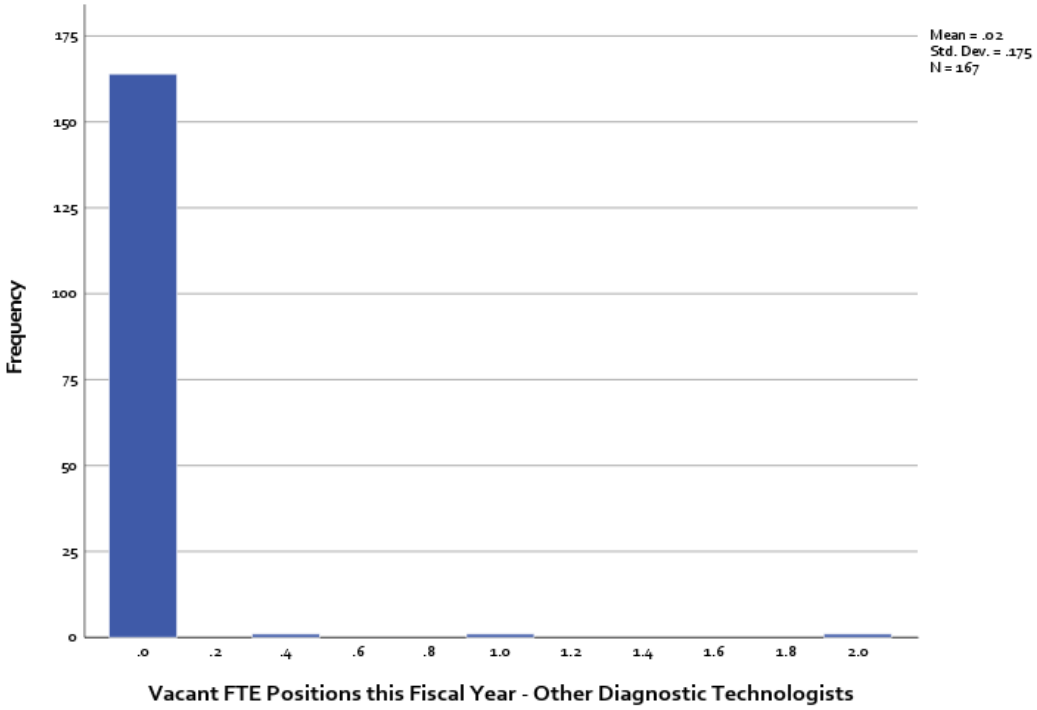


Figure 25. Total Vacant FTEs in 2020 for Other Diagnostic Technologists

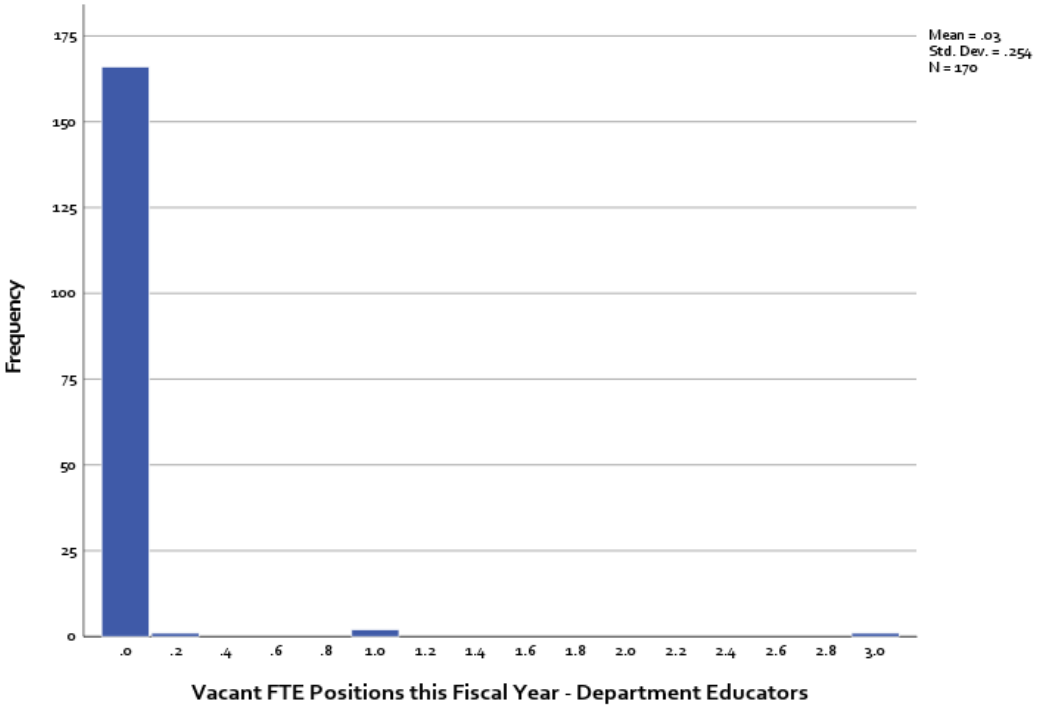


Figure 26. Total Vacant FTEs in 2020 for Department Educators

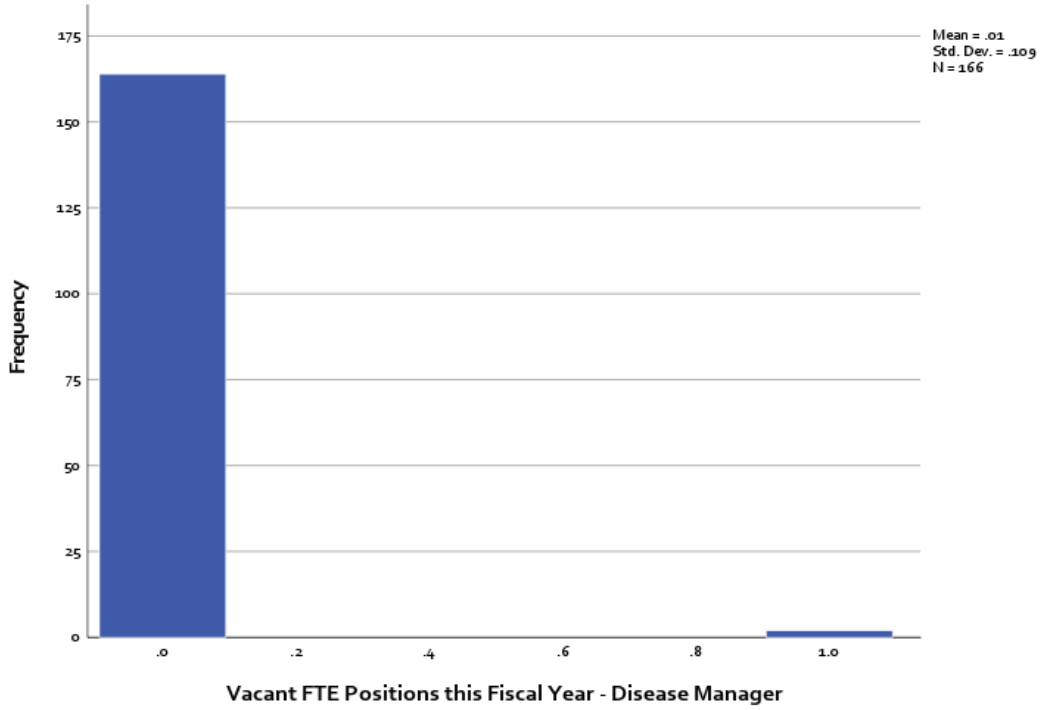


Figure 27. Total Vacant FTEs in 2020 for Disease Managers

10. How many FTEs to be held by respiratory therapists does the organization expect to employ for the year 2021 for <u>Staff Therapists?</u>

Comparing mean values from Table 3 (25.5) and Table 10 (21.6) indicated that respondents expected staff therapist FTEs to decrease by about 4.

Table 10. Estimates of total FTEs expected for Staff Therapists in 2021

N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
Valid	Missing						
209	82	21.61	2.10	10	30.38	0	155.90
291*	0	15.52	1.61	5	27.51	0	155.90

*Missing responses were converted to zero values under the expectation that at least some of these respondents skipped the question rather than enter a value of zero. Doing so produced a more conservative population estimate.

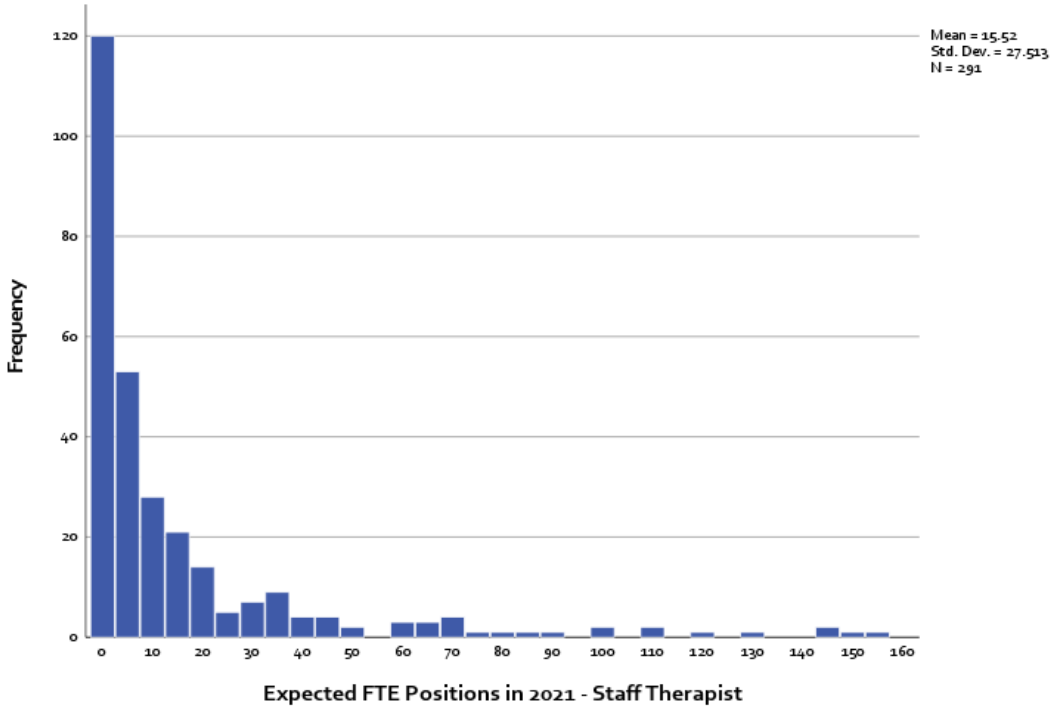


Figure 28. Total FTEs Projected for Staff Therapists in 2021

11. How many respiratory therapist FTE positions will your organization budget for the year 2021?

Comparisons of each pair of mean values between Table 4 and Table 11 indicated there will be fewer budgeted FTEs for each job position. The strongest negative changes were observed for the sleep (-0.69) and supervisor (-0.51) budgeted positions. The budgeted position showing the least change (-0.03) was the one for RT Support staff.

The AARC may want to monitor for decreases in budgeted positions. The monitoring could be a poll that presents the following question:

> *The 2020 Human Resources Study of acute care hospitals foreshadowed a potential decrease in budgeted job positions held by respiratory therapists. Have you observed reductions in budgeted positions within your department?*

Table 11. First estimate of Total Budgeted Positions in 2021

	N*							
	Valid	Missing	Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
Director/Manager	192	99	.93	.04	1.00	.56	0	4.00
Supervisor	178	113	1.22	.13	1.00	1.76	0	10.00
RT Support staff	171	120	3.37	.54	.80	7.01	0	40.00
Sleep Tech	143	148	1.15	.21	.00	2.55	0	15.80
Pulm Function Tech	156	135	.87	.11	.20	1.40	0	7.50
Diagnostic Tech	136	155	.51	.15	.00	1.69	0	12.00
Dept Educator	147	144	.24	.04	.00	.51	0	3.00
Disease Mgr / Pt Educator	136	155	.15	.04	.00	.51	0	4.00

*Extreme cases of 16 for Supervisor, 62.10 for RT Support Staff, and 10.50 for Pulmonary Function Technologist were excluded from analysis.

Table 12. Conservative estimate of Total Budgeted Positions in 2021

	N							
	Valid	Missing	Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
Director/Manager	291	0	.61	.04	1	.63	0	4.00
Supervisor	291	0	.75	.09	0	1.50	0	10.00
RT Support staff	291	0	1.98	.33	0	5.62	0	40.00
Sleep Tech	291	0	.56	.11	0	1.87	0	15.80
Pulm Function Tech	291	0	.47	.07	0	1.11	0	7.50
Diagnostic Tech	291	0	.24	.07	0	1.18	0	12.00
Dept Educator	291	0	.12	.02	0	.38	0	3.00
Disease Mgr / Pt Educator	291	0	.07	.02	0	.35	0	4.00

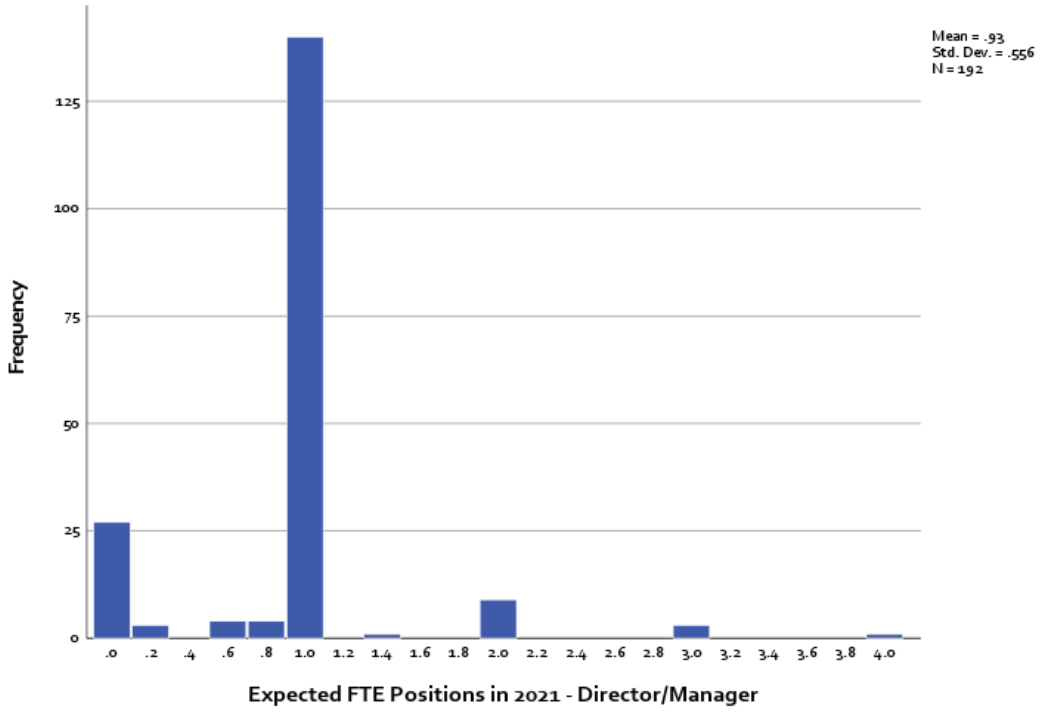


Figure 29. Expected Director/Manager FTEs in 2021

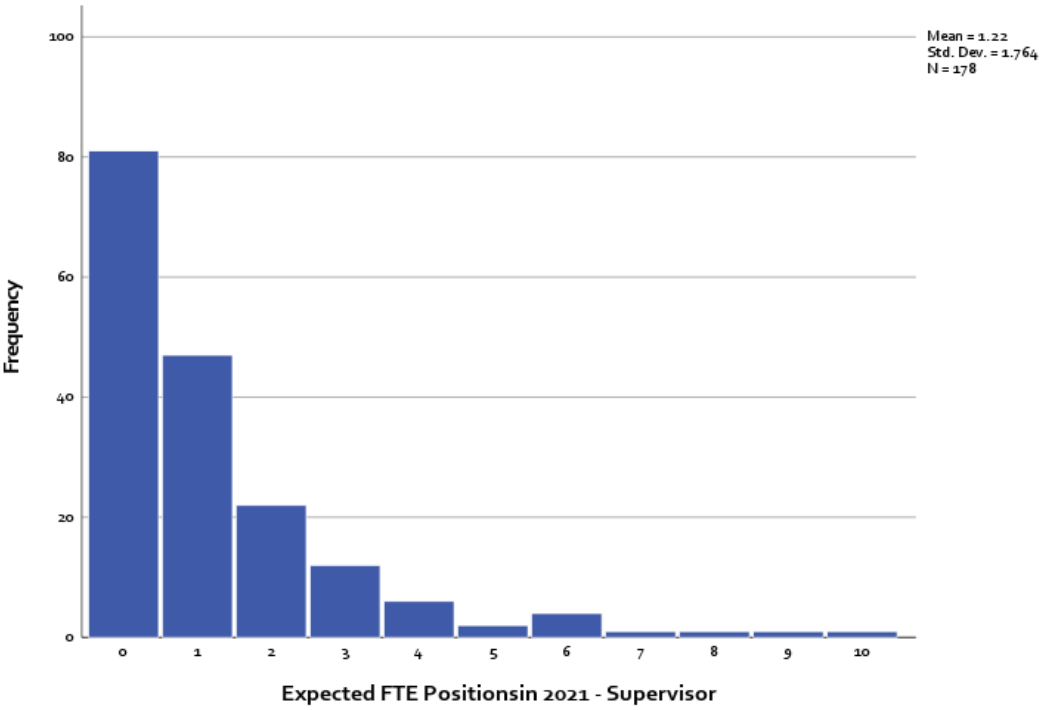


Figure 30. Expected Supervisor FTEs in 2021

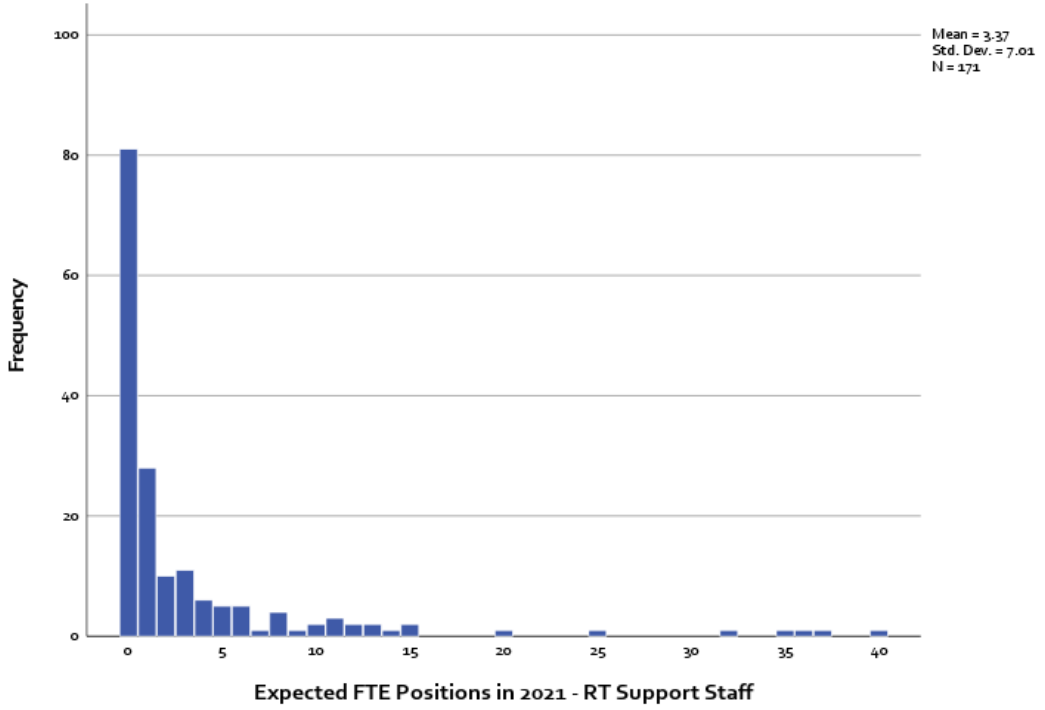


Figure 31. Expected RT Support Staff FTEs in 2021

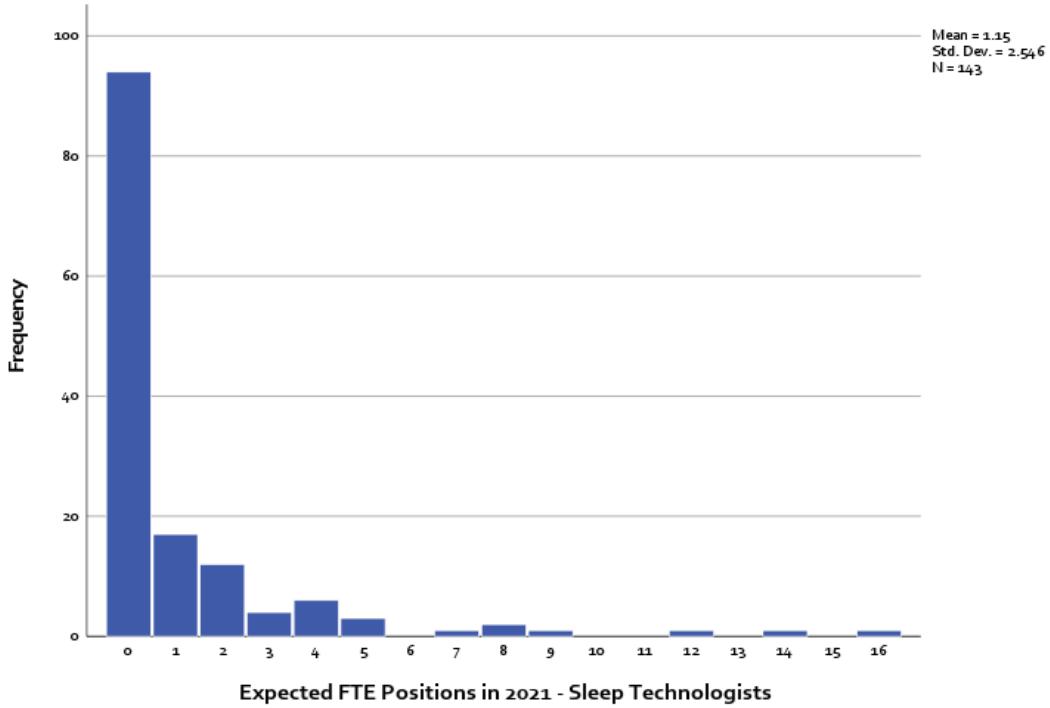


Figure 32. Expected Sleep Technologist FTEs in 2021

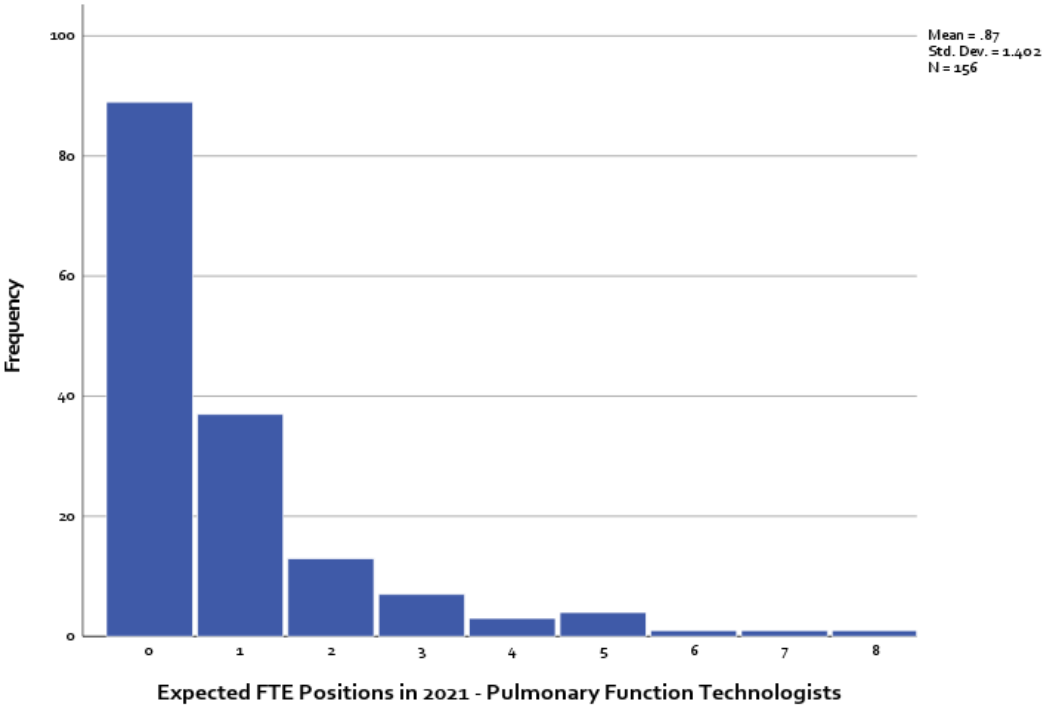


Figure 33. Expected Pulmonary Function Technologist FTEs in 2021

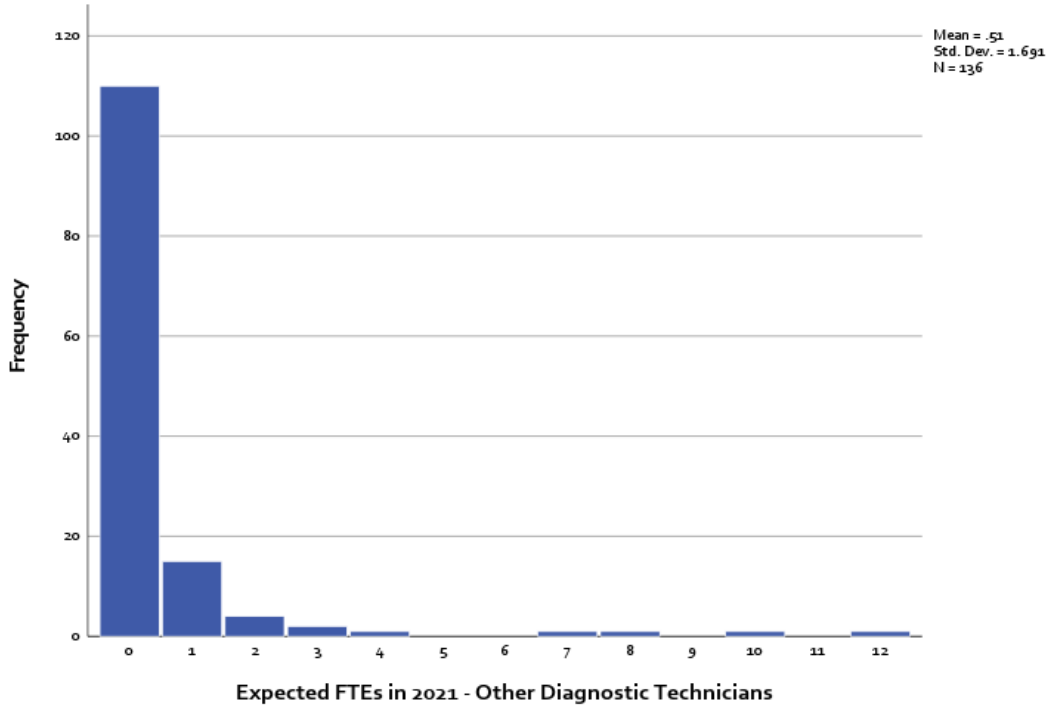


Figure 34. Expected Diagnostic Technician FTEs in 2021

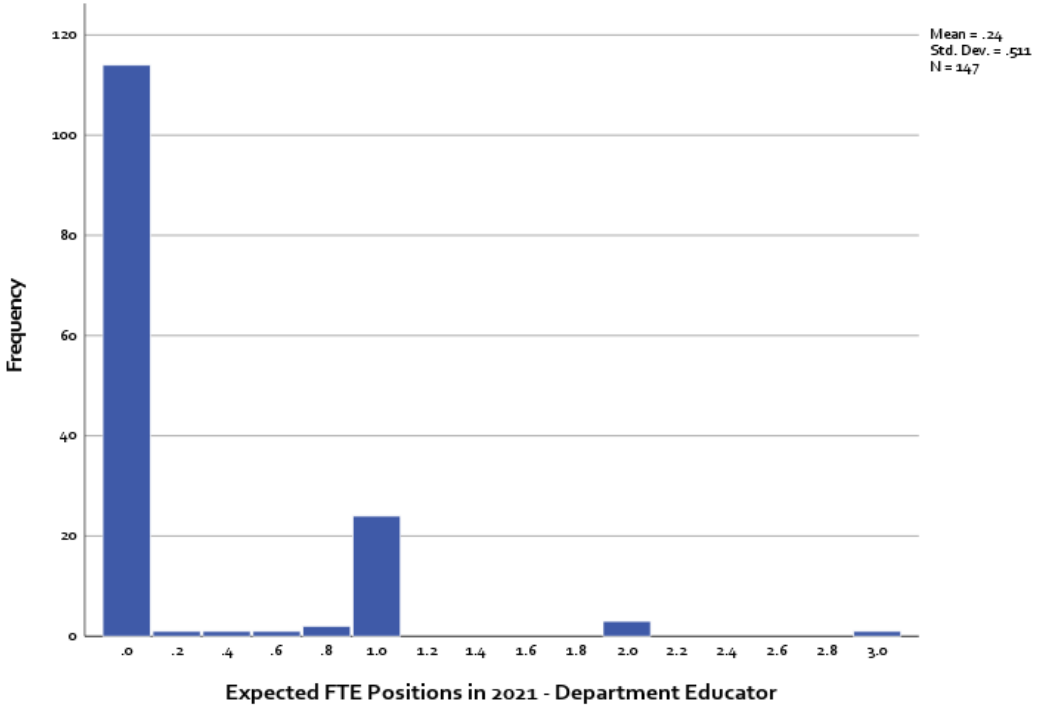


Figure 35. Expected Department Educator FTEs in 2021

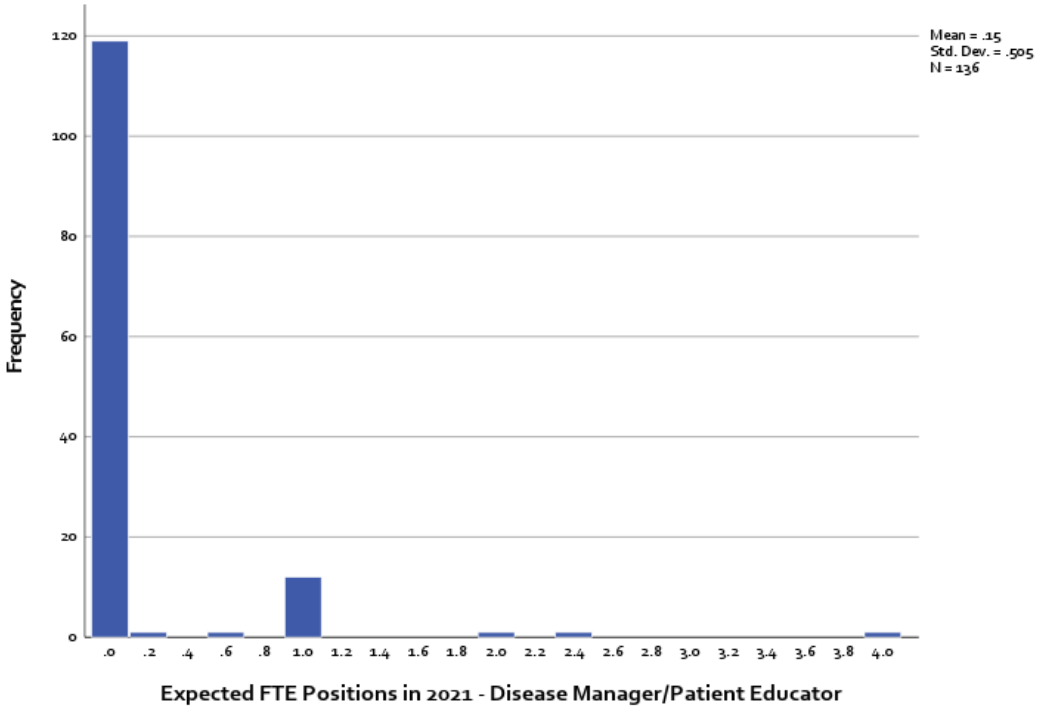


Figure 36. Expected Disease Manager/Patient Educator FTEs in 2021

Last Fiscal Year

12. How many respiratory therapists (number of therapists – not FTEs) were employed on the last day of the last fiscal year?

Both Table 13 and Table 14 indicated that a typical technical director had reported employing at least some respiratory therapists in part time positions. Depending on how one interpreted missing responses a typical department had between 19 and 29 therapists who were employed.

Table 13. First estimates of full and part time therapists employed on the last day of the last fiscal year

	N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
	Valid	Missing						
Full Time therapists employed on the last day of the last fiscal year	197	94	22.73	2.09	11.00	29.33	0	185
Part Time therapists employed on the last day of the last fiscal year	174	117	6.25	.76	2.50	9.96	0	80

*Table 14. Conservative estimates of full and part time therapists employed on the last day of the last fiscal year**

	N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
	Valid	Missing						
Full Time therapists employed on the last day of the last fiscal year	291	0	15.39	1.55	5	26.36	0	185
Part Time therapists employed on the last day of the last fiscal year	291	0	3.74	.49	0	8.28	0	80

*Missing responses were converted to zero values under the expectation that at least some of these respondents skipped the question rather than enter a value of zero. Doing so produced a more conservative population estimate.

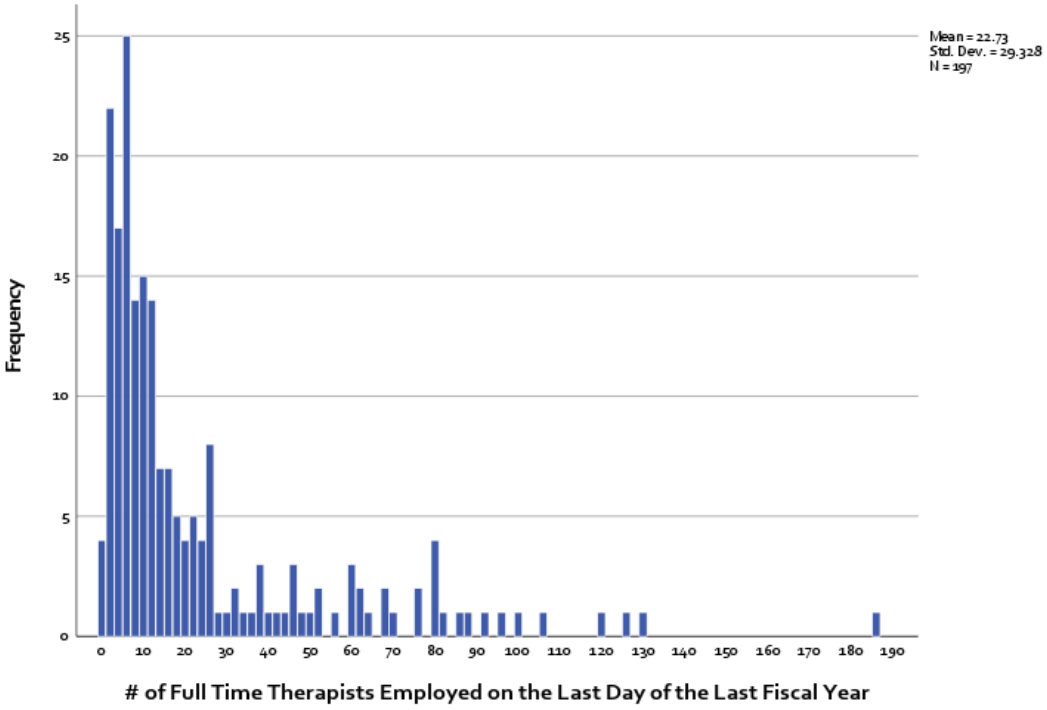


Figure 37. Full Time Therapists Employed on the Last Day of the Last Fiscal Year

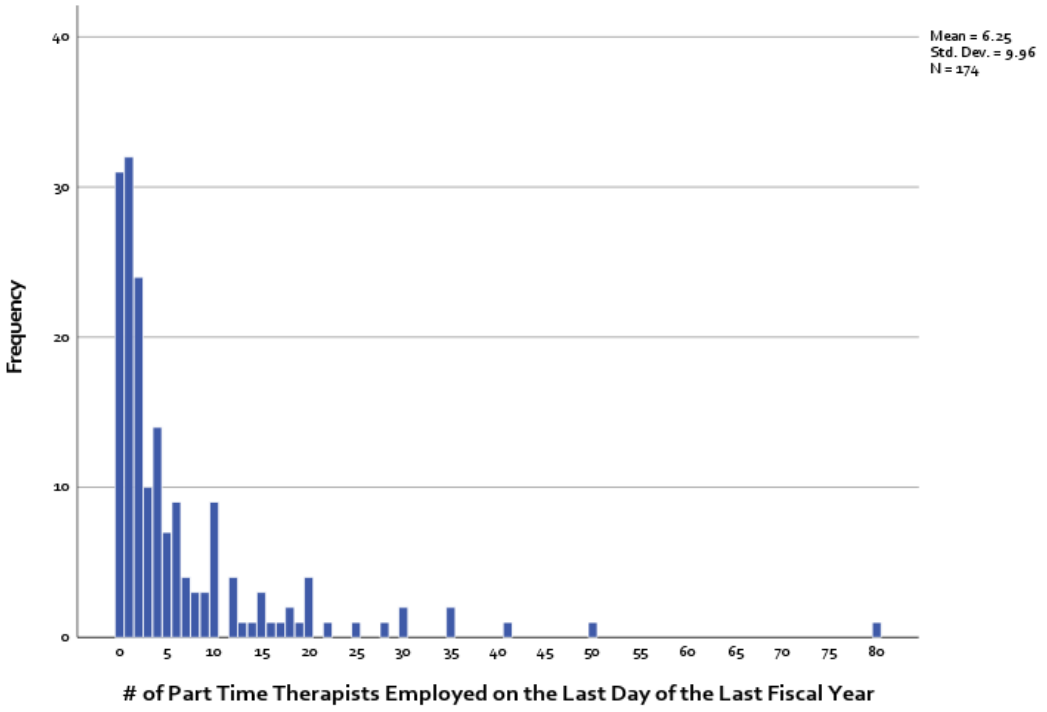


Figure 38. Part Time Therapists Employed on the Last Day of the Last Fiscal Year

13. How many respiratory therapists (number of therapists – not FTEs) vacated a job position during the last fiscal year?

According to results shown in Tables 15 and 16, the typical respondent indicated that two to three therapists working full time and one therapist working part time had vacated a job position over the last year.

Table 15. First Estimate of Therapists Who Vacated a Position During the Last Fiscal Year.

	N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
	Valid	Missing						
Full Time therapists that vacated a job position during the last fiscal year	194	97	2.85	.28	1	3.93	0	25
Part Time therapists that vacated a job position during the last fiscal year	166	125	1.20	.15	0	1.88	0	12

*Table 16. Conservative Estimate of Therapists Who Vacated a Position During the Last Fiscal Year**

	N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
	Valid	Missing						
Full Time therapists that vacated a job position during the last fiscal year	291	0	1.90	.20	0	3.48	0	25
Part Time therapists that vacated a job position during the last fiscal year	291	0	.68	.09	0	1.54	0	12

*Missing responses were converted to zero values under the expectation that at least some of these respondents skipped the question rather than enter a value of zero. Doing so produced a more conservative population estimate.

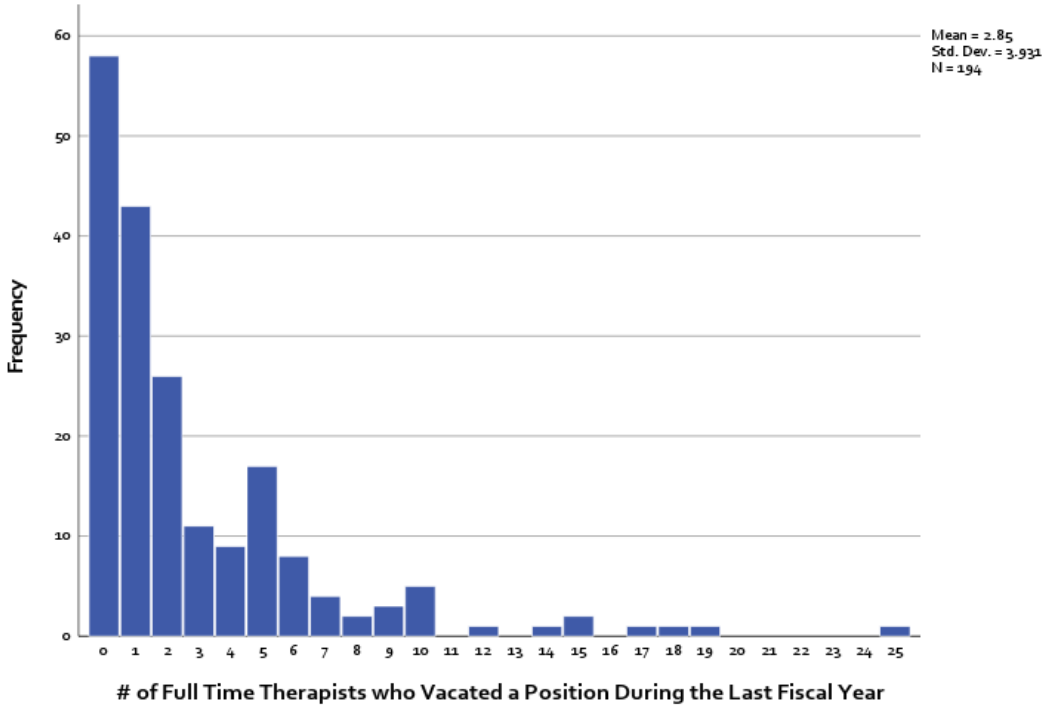


Figure 39. Full Time Therapists Who Vacated a Position During the Last Fiscal Year

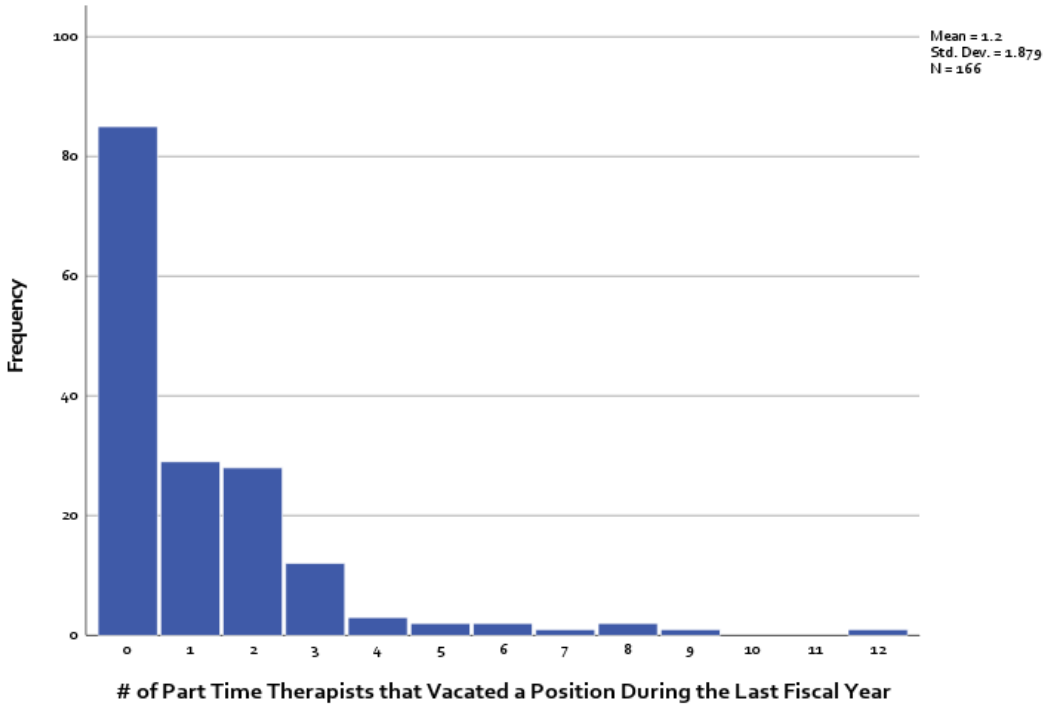


Figure 40. Part Time Therapists Who Vacated a Position During the Last Fiscal Year

Hourly Wage

14. What is the average hourly wage, including any differentials, for respiratory therapists who hold the following job titles?

Statistical modeling to study and predict current total compensation is described in the report about responses from individual therapists. Those results were informed by several thousands of responses, which renders them far more generalizable than would have been available in this phase of the study. However, one can still glean potentially useful benchmarking information from Table 17.

Table 17. Hourly Wage by Position Sorted in Descending Mean Order

	N		Mean	Std. Error of Mean	Std. Deviation	Minimum*	Maximum
	Valid	Missing					
Director/Manager	137	154	46.12	1.279	14.971	22.00	135
Department Educator	30	261	39.80	2.380	13.037	21.00	80
Supervisor	91	200	38.14	1.080	10.301	22.00	90
RT Support Staff	53	238	33.19	1.522	11.081	20.00	80
Pulmonary Function Technologist	66	225	32.53	1.029	8.361	20.47	75
Disease Mgr/Pt Educator	14	277	32.45	1.906	7.131	25.00	50
Other Technologist	17	274	31.68	2.718	11.207	14.00	62
Therapist	145	146	29.91	.526	6.336	18.00	56
Sleep Technologist	43	248	29.91	1.463	9.597	15.00	80

*Excluded cases of $0 and extreme low values of $5/hour for therapist, $1/hour for director, $5/hour for supervisor, $4/hour for PFT, and $2/hour for Department Educator

We compared the average hourly wage within each position listed in Table 18 for differences by CMS designation as a critical access hospital. Therapists and Directors/Managers were paid less by hospitals that were designated as critical access hospitals, while the other positions were paid more.

Table 18. Mean hourly wage ($) by position by CMS Critical Access Hospital designation

	Is this facility designated as a Critical Access Hospital by CMS?							
	Yes				No			
	N	Mean	Std. Dev	Std. Error of Mean	N	Mean	Std. Dev	Std. Error of Mean
Therapist	45	28.68	6.59	0.98	99	**30.44**	6.20	0.62
Director/Manager	43	42.39	17.89	2.73	93	**47.90**	13.24	1.37
Supervisor	20	**39.67**	14.10	3.15	71	37.71	9.04	1.07
RT Support Staff	17	**34.32**	13.53	3.28	36	32.65	9.89	1.65
Sleep Tech	18	**32.49**	13.58	3.20	25	28.05	4.68	0.94
PFT	12	**35.51**	16.33	4.72	54	31.50	5.87	0.80
Other Tech	7	**35.36**	14.00	5.29	9	29.44	9.10	3.03
Department Educator	9	**42.44**	16.09	5.36	21	38.67	11.77	2.57
Disease Mgr/Pt Educator	4	**33.99**	7.03	3.51	10	31.84	7.45	2.36

The highest wages by region occurred in the Northeast (Director/Manager, RT Support Staff, Sleep Technologist) and the West (Therapist, Supervisor, Pulmonary Function Technologist, Other Diagnostic Technologist, Department Educator, Disease Manager/Patient Educator)

Table 19. Mean hourly wage ($) by position by Region

Region		N		Mean	Std. Error of Mean	Std. Deviation
		Valid	Missing			
Northeast	Therapist	23	27	34.21	1.34	6.41
	Director/Manager	23	27	**55.60**	4.75	22.76
	Supervisor	13	37	44.59	4.77	17.20
	RT Support Staff	9	41	**39.97**	6.01	18.03
	Sleep Tech	7	43	**37.24**	7.55	19.98
	PFT	11	39	37.00	3.99	13.22
	Other Tech	4	46	33.50	4.05	8.10
	Department Educator	6	44	47.08	7.91	19.37
	Disease Mgr/Pt Educator	0	50	--	--	--
South	Therapist	45	44	27.59	.77	5.14
	Director/Manager	41	48	43.45	1.97	12.64
	Supervisor	29	60	36.90	1.52	8.17
	RT Support Staff	14	75	32.16	1.83	6.85
	Sleep Tech	11	78	25.36	1.44	4.79
	PFT	18	71	30.30	2.04	8.65
	Other Tech	4	85	26.13	4.48	8.97
	Department Educator	6	83	41.33	3.01	7.37
	Disease Mgr/Pt Educator	5	84	31.80	1.80	4.02
Midwest	Therapist	62	63	28.14	.44	3.46
	Director/Manager	56	69	41.42	1.16	8.66
	Supervisor	35	90	34.15	.91	5.40
	RT Support Staff	21	104	28.78	1.00	4.56
	Sleep Tech	21	104	29.17	.79	3.61
	PFT	30	95	29.98	.77	4.22
	Other Tech	6	119	29.67	3.99	9.77
	Department Educator	12	113	31.44	1.47	5.08
	Disease Mgr/Pt Educator	7	118	28.76	1.17	3.10

Region		N		Mean	Std. Error of Mean	Std. Deviation
West	Therapist	15	11	**37.60**	2.43	9.40
	Director/Manager	17	9	55.19	3.63	14.96
	Supervisor	14	12	**44.67**	2.78	10.38
	RT Support Staff	9	17	38.30	4.84	14.51
	Sleep Tech	4	22	33.50	5.12	10.25
	PFT	8	18	**38.58**	3.25	9.19
	Other Tech	3	23	**40.67**	10.73	18.58
	Department Educator	6	20	**47.73**	5.62	13.77
	Disease Mgr/Pt Educator	2	24	**47.00**	3.00	4.24

The urban vs. rural geographic designation summarized in Table 20 showed differences in the average hourly wages paid. Facilities in urban environments paid more than rural hospitals.

Table 20. Mean hourly wage ($) by position by urban/rural location

	Urban/Rural							
	Rural				Urban			
	N	Mean	Std. Dev	Std. Error of Mean	N	Mean	Std. Dev	Std. Error of Mean
Therapist	105	28.82	5.88	0.57	40	**32.76**	6.67	1.06
Director/Manager	100	43.98	15.72	1.57	37	**51.88**	10.98	1.80
Supervisor	56	37.07	11.22	1.50	35	**39.85**	8.51	1.44
RT Support Staff	35	32.97	11.85	2.00	18	**33.60**	9.71	2.29
Sleep Tech	39	29.81	9.55	1.53	4	**30.88**	11.54	5.77
PFT	45	32.11	9.37	1.40	22	**32.51**	7.09	1.51
Other Tech	13	30.62	8.36	2.32	4	**35.13**	19.22	9.61
Department Educator	17	39.05	14.65	3.55	13	**40.79**	11.07	3.07
Disease Mgr/Pt Educator	7	30.94	8.75	3.31	7	**33.96**	5.31	2.01

We asked whether the administrative officer had a clinical background. Additional details can be found on Page 50. Table 21 compared means for hourly wages by job positions and whether the administrative officer had a clinical background. Only RT Support Staff and Other Diagnostic Technologists saw increased wages in facilities where the administrative officer had a clinical background

Table 21. Mean hourly wage ($) by position by administrative officer with clinical background

	Assuming you are the Director/Manager of respiratory care services, does the administrative officer to whom you report have a clinical background?							
	Yes				No			
	N	Mean	Std. Deviation	Std. Error Mean	N	Mean	Std. Deviation	Std. Error Mean
Therapist	106	29.79	5.54	.54	36	**29.89**	7.80	1.30
Director/Manager	100	45.38	12.37	1.24	34	**47.42**	20.32	3.49
Supervisor	71	37.10	8.60	1.02	19	**41.14**	14.60	3.35
RT Support Staff	37	**32.87**	9.31	1.53	15	32.50	14.08	3.64
Sleep Tech	30	28.22	5.61	1.02	11	**34.89**	15.99	4.82
PFT	51	31.37	6.77	.95	13	**34.80**	13.85	3.84
Other Tech	14	**33.89**	10.53	2.81	3	21.33	9.45	5.46
Department Educator	22	38.05	11.47	2.44	8	**44.62**	16.54	5.85
Disease Mgr/Pt Educator	7	30.22	4.73	1.79	6	**32.13**	6.06	2.47

We also asked about the number of staffed beds in the facility. Additional details can be found on Page 56. We created three bed-size groups (Less than 50, 50 to 200, More than 200) to compare mean hourly wages as shown in Table 22. The largest facilities paid the highest wage for each position except for "Other Diagnostic Technologists."

Table 22. Mean hourly wage ($) position by bed size

Bed Size		N		Mean	Std. Error of Mean	Std. Deviation
		Valid	Missing			
Less than 50	Therapist	36	9	26.82	.68	4.11
	Director/Manager	33	12	37.26	1.46	8.40
	Supervisor	14	31	33.43	1.54	5.76
	RT Support Staff	9	36	27.33	1.33	4.00
	Sleep Tech	12	33	28.29	1.57	5.45
	PFT	4	41	25.80	4.63	9.27
	Other Tech	3	42	**36.67**	2.91	5.03
	Department Educator	2	43	30.00	.00	.00
	Disease Mgr/Pt Educator	1	44	29.00		
50 to 200	Therapist	48	6	29.17	.77	5.36
	Director/Manager	45	9	43.82	1.50	10.07

Bed Size		N		Mean	Std. Error of Mean	Std. Deviation
		Valid	Missing			
	Supervisor	29	25	34.30	1.25	6.72
	RT Support Staff	15	39	28.74	1.13	4.37
	Sleep Tech	16	38	28.64	1.64	6.57
	PFT	23	31	31.17	1.20	5.76
	Other Tech	9	45	30.28	4.50	13.50
	Department Educator	3	51	29.67	2.33	4.04
	Disease Mgr/Pt Educator	3	51	25.67	.67	1.15
More than 200	Therapist	54	4	**32.42**	.95	6.96
	Director/Manager	52	6	**53.69**	2.44	17.56
	Supervisor	46	12	**41.50**	1.74	11.82
	RT Support Staff	27	31	**36.55**	2.55	13.24
	Sleep Tech	12	46	**33.88**	4.43	15.35
	PFT	36	22	**33.61**	1.63	9.80
	Other Tech	5	53	31.20	4.51	10.08
	Department Educator	24	34	**41.71**	2.79	13.66
	Disease Mgr/Pt Educator	8	50	**31.79**	1.07	3.02

15. What is the average hourly pay rate, including differentials, for respiratory therapists who are new graduates of the following degree programs?

Typical new graduates of Masters degree programs who were described in Table 24 earned more in an hourly wage than those from Bachelor's degree programs, who earned more than graduates from Associate degree programs. Mean and median values shown in Table 23 can be considered typical wages on entry into the profession.

Table 23. Mean hourly wage by degree program

	N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum*	Maximum
	Valid	Missing						
Associate	148	143	24.90	.432	24.00	5.25	16.50	48
Bachelor's	134	157	25.73	.476	24.00	5.52	17.00	48
Masters	101	190	26.94	.610	25.45	6.13	17.00	48

*Values less than $10/hour were excluded from analysis.

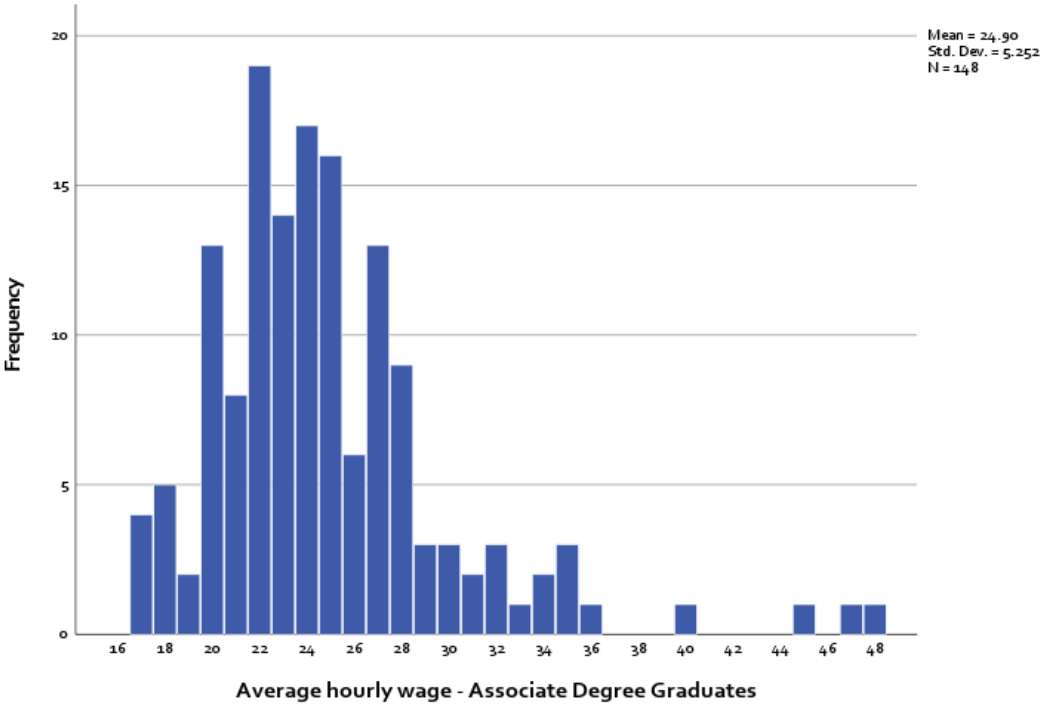


Figure 41. Mean hourly wage ($) for New Graduates of Associate Degree Programs

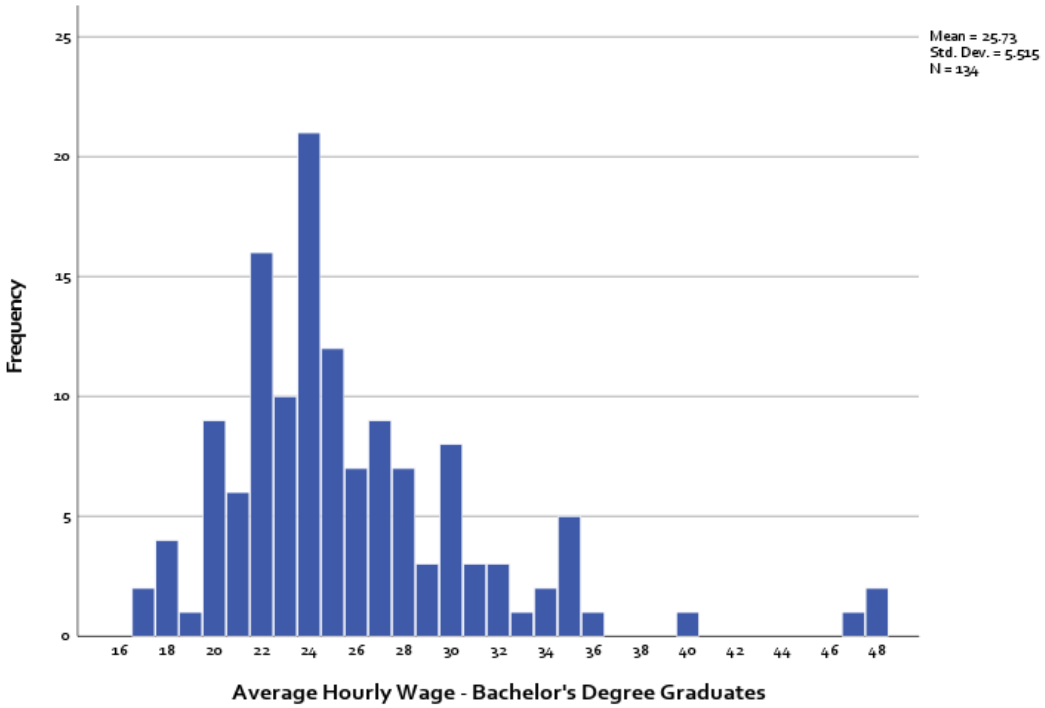


Figure 42. Mean hourly wage ($) for New Graduates of Bachelor's Degree Programs

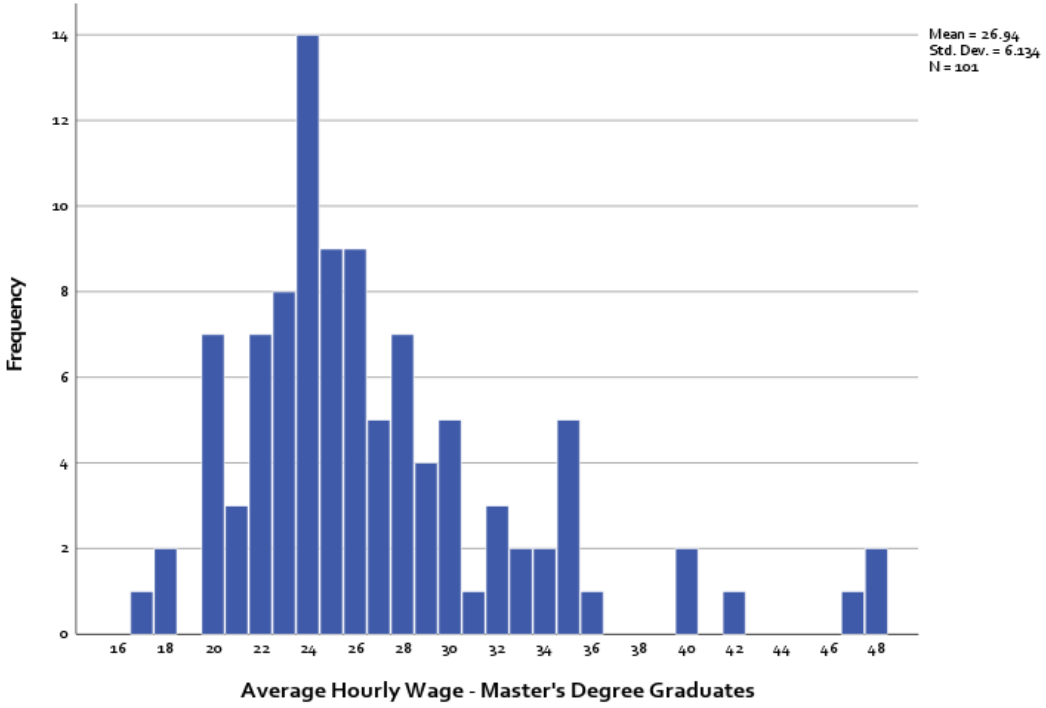


Figure 43. Mean hourly wage ($) for New Graduates of Master's Degree Programs

16. Indicate the number of respiratory therapist FTEs who separated employment from your organization in the last fiscal year for the reasons listed below.

The same potential issues with missing responses are present in this set of responses as were discussed earlier in this report. If one assumes that technical directors had incidences of employment separation that they chose not to report, then the population projections in Table 24 are more likely. If one assumes that technical directors who skipped this question were more likely to have had zero incidences of employment separation, then the lower projections in Table 25 are more likely.

Table 24. First Estimates for the Number of FTEs who Separated Employment

	N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
	Valid	Missing						
Retirement	121	170	.72	.11	0	1.23	0	7
Voluntary Separation	147	144	2.50	.29	1	3.49	0	22
Inadequate Performance	123	168	.57	.07	0	.78	0	4
Workforce Reduction	102	189	.13	.05	0	.54	0	4

Table 25. Conservative Estimates for the Number of FTEs who Separated Employment

	N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
	Valid	Missing						
Retirement	291	0	.30	.05	0	.87	0	7
Voluntary Separation	291	0	1.26	.16	0	2.77	0	22
Inadequate Performance	291	0	.24	.03	0	.58	0	4
Workforce Reduction	291	0	.04	.02	0	.32	0	4

*Missing responses were converted to zero values under the expectation that at least some of these respondents skipped the question rather than enter a value of zero. Doing so produced a more conservative population estimate.

Most hospitals did not have a respiratory therapist retire in 2014. Of the hospitals that did and were described in *Figure 44*, retirements were typically limited to 1 or 2 FTEs per hospital.

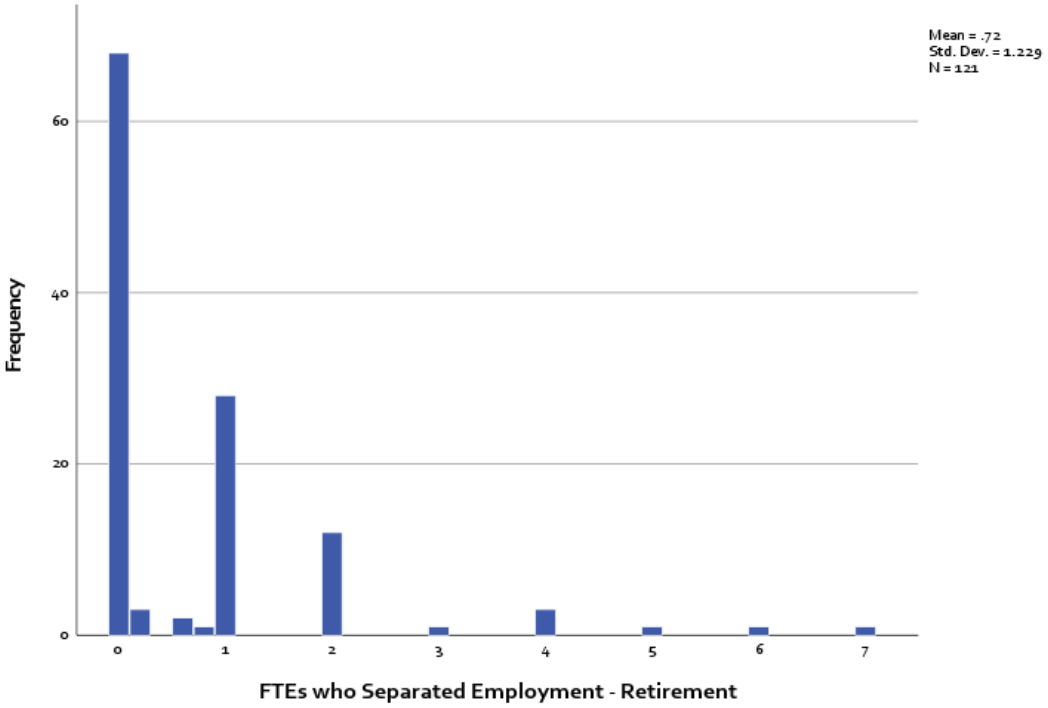


Figure 44. FTEs who Separated Employment Due to Retirement

When hospitals had respiratory therapists voluntarily separate from employment, four or fewer FTEs were typically involved. A median value of 1 indicated that the typical hospital had one FTE separate from employment voluntarily during the last fiscal year.

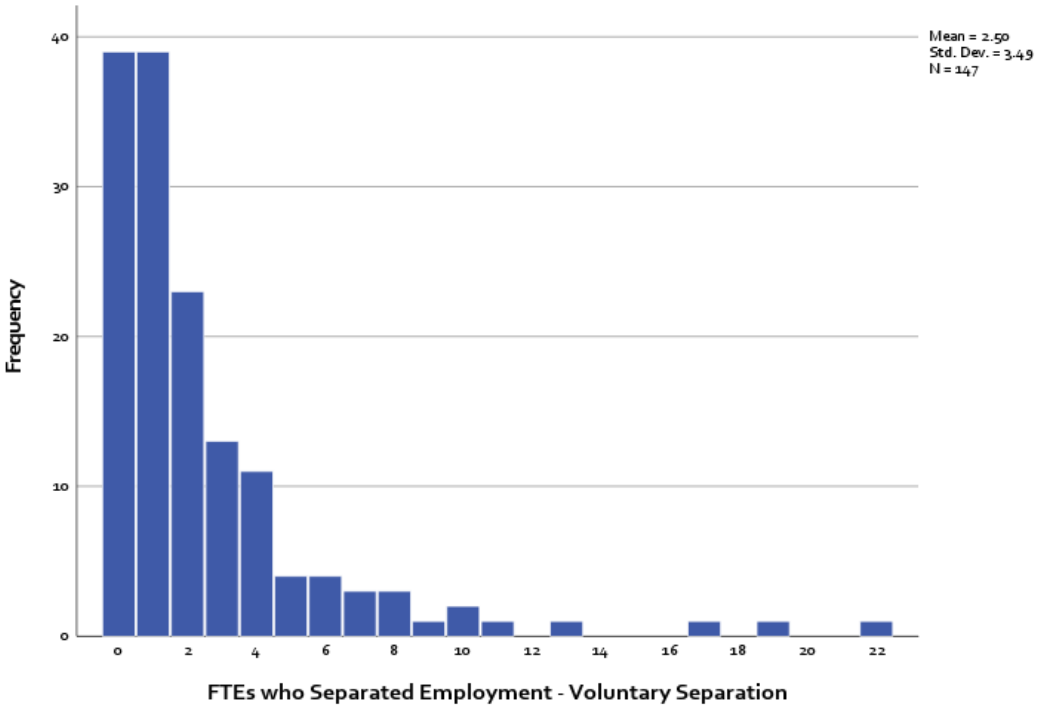


Figure 45. FTEs who Separated Employment Due to Voluntary Separation

Because the median value was zero, most hospitals did not experience a separation from employment due to inadequate performance. Of those hospitals that did, typically no more than 2 FTEs were involved as *Figure 46* showed.

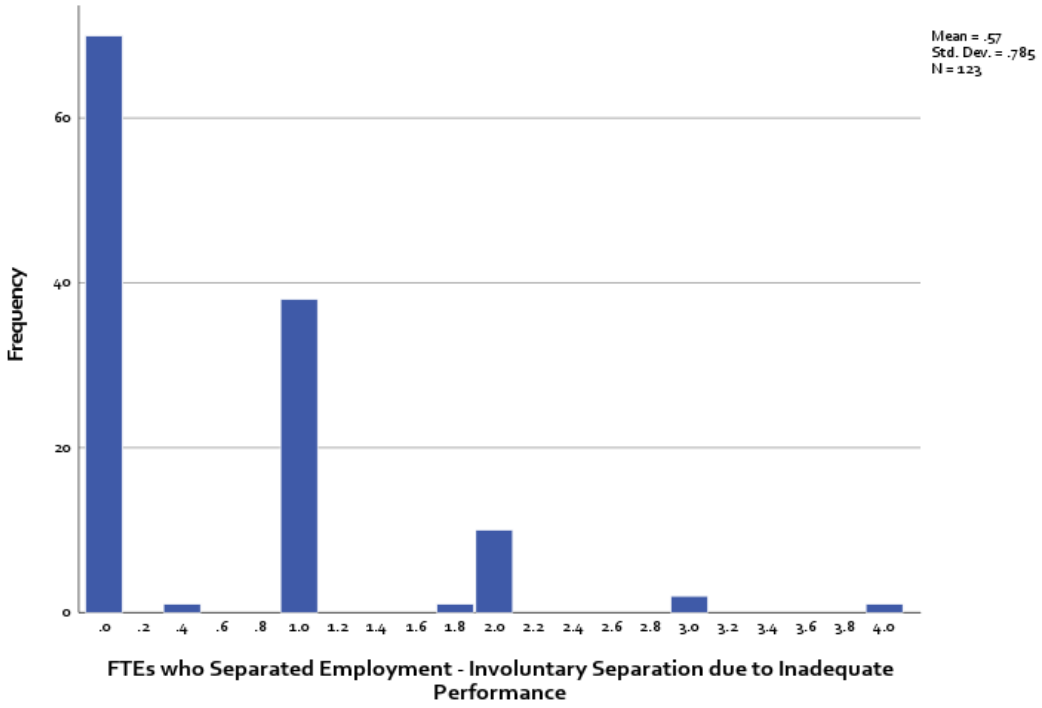


Figure 46. FTEs who Separated Employment Due to Inadequate Performance

Again, a median value of zero indicated that most hospitals did not experience a workforce reduction among respiratory therapists. Workforce reductions could take other forms. For example, if a therapist chooses to retire and the FTE goes unfilled or is closed, then the impact would be the same on the personnel who would remain.

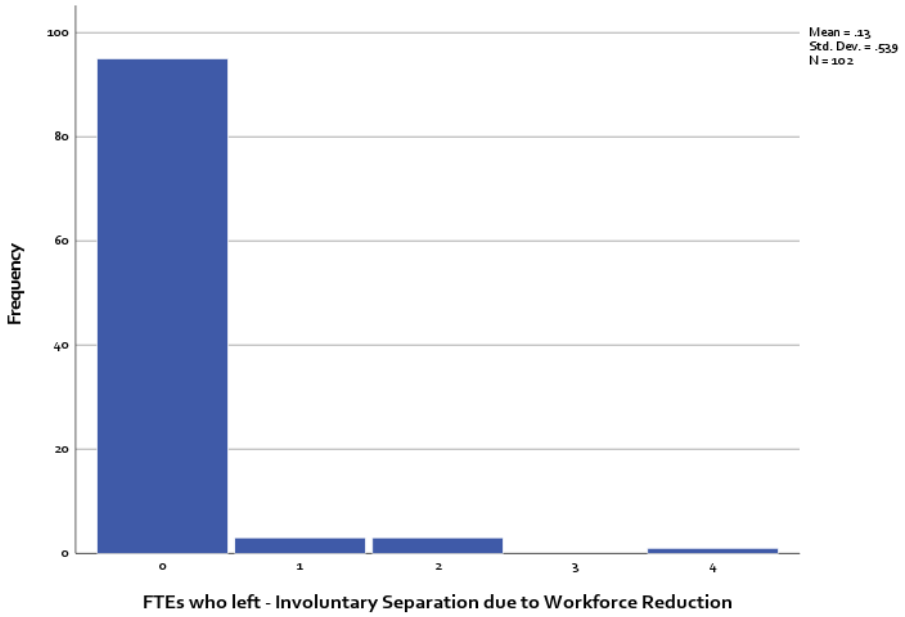


Figure 47. FTEs who Separated Employment Due to Workforce Reduction

17. What is the approximate percentage of total hours worked by respiratory therapists that were paid as overtime in the last fiscal year?

Respondents were provided with options ranging from '0' to '30 or more'. For the following calculations individuals who indicated paying overtime as '30 or more' percent were converted to a value of 30.

As before, we produced a second table (Table 27) that reduced estimates for overtime assuming that some people skipped this question rather than enter a value of zero when they knew they had not experienced any overtime within the last year.

Table 26. First estimate of the percentage of hours worked as overtime

N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
Valid	Missing						
149	142	7.70	.59	5	7.22	0	30

*Table 27. Conservative estimate of the percentage of hours worked as overtime**

N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
Valid	Missing						
291	0	3.94	.38	0	6.44	0	30

*Missing responses were converted to zero values under the expectation that at least some of these respondents skipped the question rather than enter a value of zero. Doing so produced a more conservative population estimate.

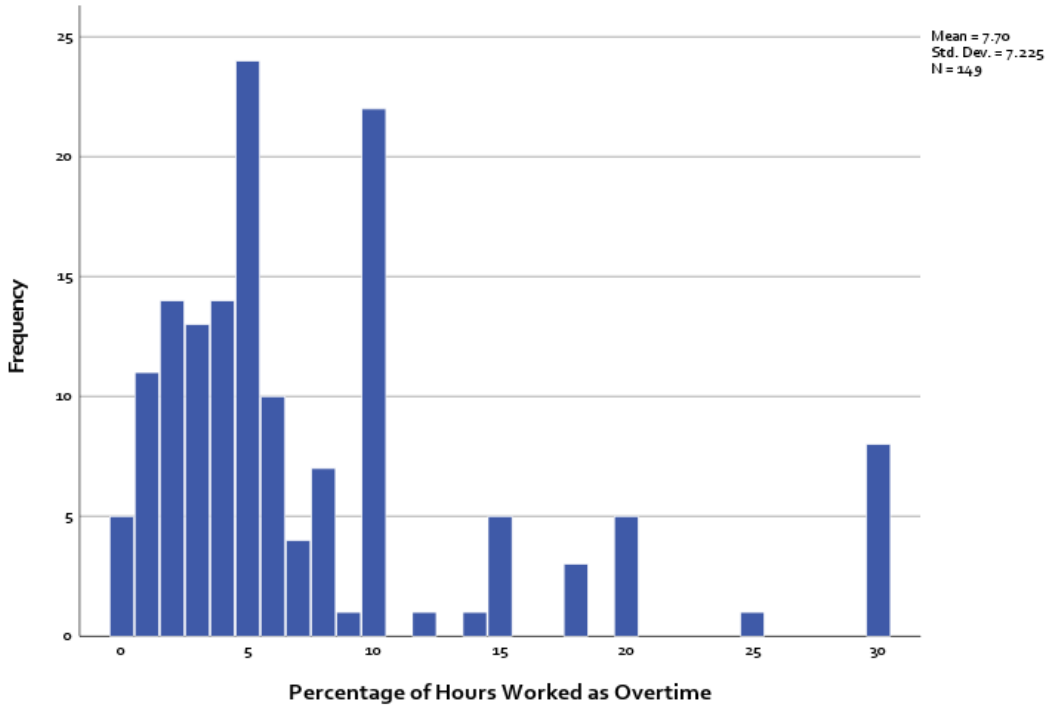


Figure 48. Percentage of hours worked as overtime

18. Is your department required to benchmark selected productivity or quality metrics against departments of comparable hospitals?

The valid percent of "Yes" responses was 55.0%. However, there were many missing responses so the percentage could have been as low as 30.2%. Frequencies can be found in Appendix C, Table 44.

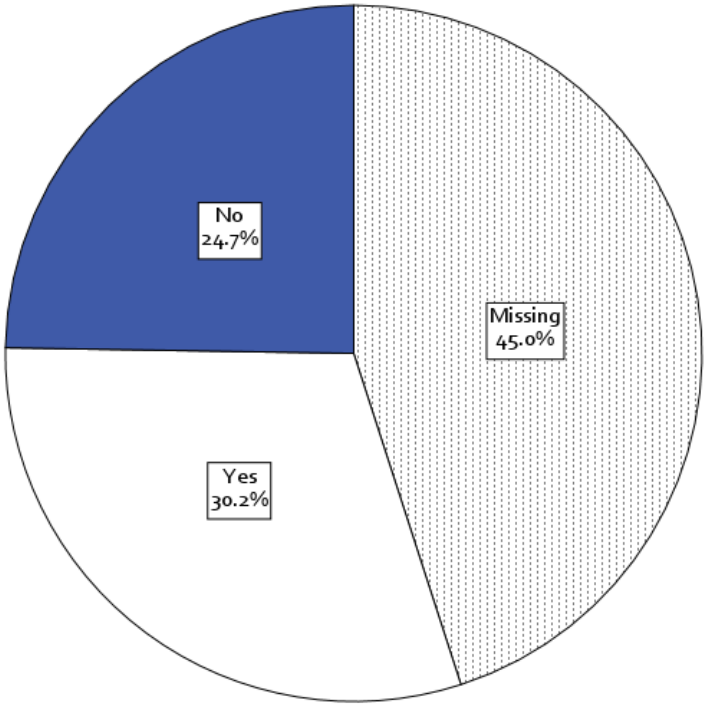


Figure 49. Distribution of benchmark use

19. How many hours does it typically take to orient a new respiratory therapist in your organization?

There was a large range of responses to this question reported in Table 28. After evaluating the median and mean values, it seemed fair to state that the typical orientation period was 4 to 5 weeks long while assuming a 40-hour workweek.

Table 28. Number of hours spent orienting new employees

N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
Valid	Missing						
156	135	219.63	17.50	160	218.61	12	1,200

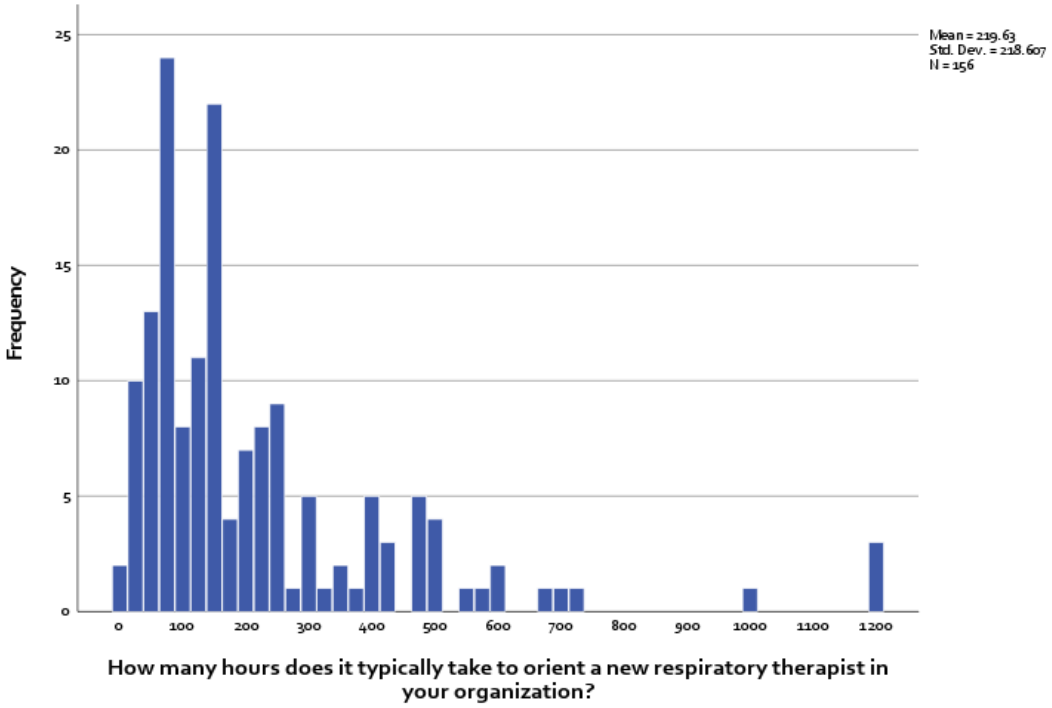


Figure 50. Hours spent orienting new employees

20. Does your department routinely measure the productivity of respiratory therapists?

The valid percent of "Yes" responses was 73.3. However, there were many missing responses so the percentage could have been as low as 41.6. Frequencies can be found in Appendix C, Table 45.

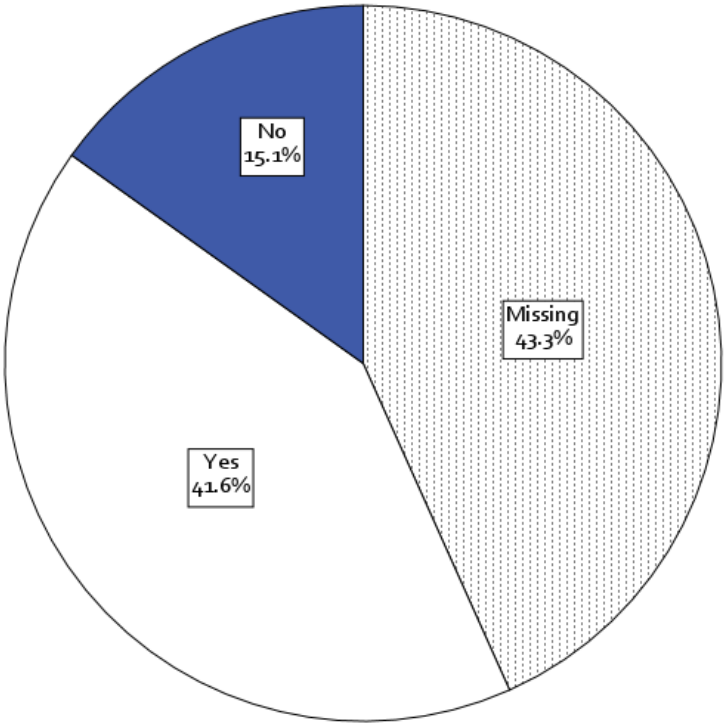


Figure 51. Distribution of department productivity measures

21. Which of the following is used to measure productivity in your institution?

Of those who routinely measure productivity, most (68.1%) of respondents used procedures and charges (64.7%). Respondents were directed to select all that applied. "Other" methods described by respondents can be found in Appendix D.

Table 29. Methods for measuring productivity

		Responses		Percent of Cases
		N	Percent	
	Relative value units (RVUs)	56	23.4%	47.1%
	Charges	77	32.2%	64.7%
	Procedures	81	33.9%	68.1%
	Patient days	17	7.1%	14.3%
	Other measure	8	3.3%	6.7%
Total		239	100.0%	200.8%

22. Does your organization use any protocols to deliver respiratory care?

The valid percent of "Yes" responses was 76.2. However, there were many missing responses so the value could have been as low as 43.0. Frequencies can be found in Appendix C, Table 46.

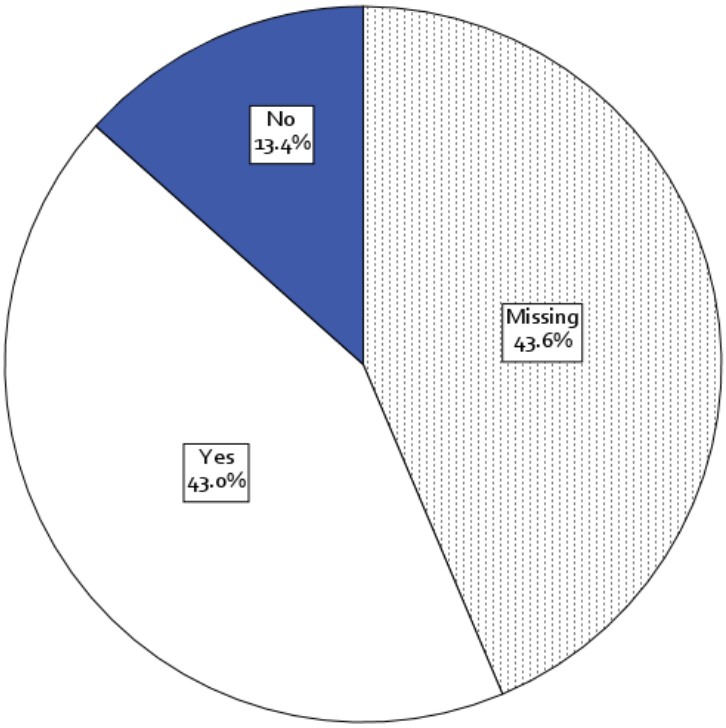


Figure 52. Use of protocols

23. What types of protocols are used by respiratory therapists in your organization?

Large percentages of these acute care hospitals had protocols in place for oxygen therapy and mechanical ventilation as Table 30 showed. Protocols for bronchodilator therapy and bronchial hygiene were also prevalent as reported by a majority of respondents.

Table 30. Protocols used

		Responses		Percent of Cases
		N	Percent	
	Oxygen	116	24.1%	93.5%
	Bronchial hygiene	71	14.7%	57.3%
	Lung hyperinflation	60	12.4%	48.4%
	Bronchodilator therapy	83	17.2%	66.9%
	Disease-based	59	12.2%	47.6%
	Mechanical ventilation	93	19.3%	75.0%
Total		482	100.0%	388.7%

24. Assuming you are the Director/Manager of respiratory care services, does the administrative officer to whom you report have a clinical background?

The valid percent of "Yes" responses was 73.6. However, there were many missing responses so the value could have been as low as 41.2. Frequencies can be found in Appendix C, Table 47.

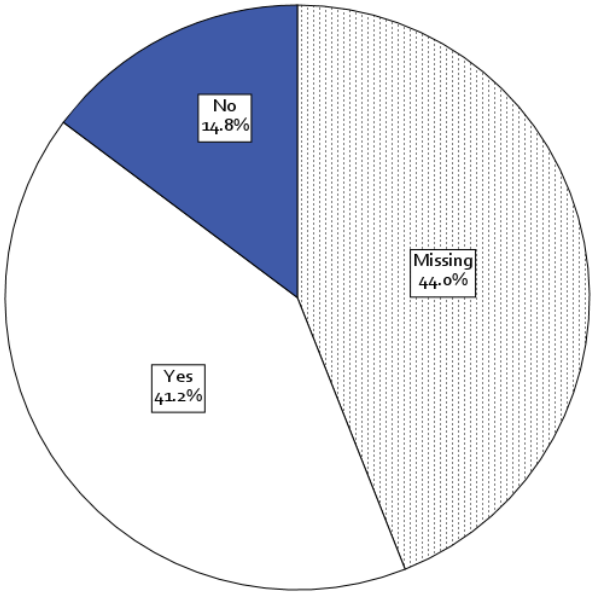


Figure 53. Distribution of managers with a clinical background

25. Assuming you are the Director/Manager of respiratory care services, what is the clinical background of the administrative officer to whom you report?

When the administrative officer to whom the director or manager of respiratory care services reported had a clinical background, it was most often a nurse. Frequencies can be found in Appendix C, Table 48. Responses about the "Other" clinical background were documented in Appendix D.

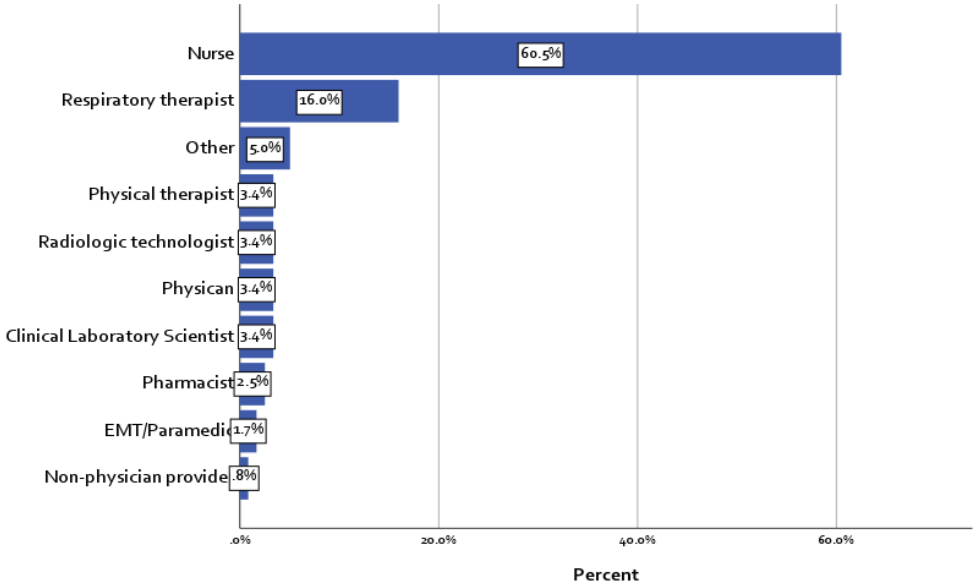


Figure 54. Clinical background of administrative officer

26. Does the respiratory therapy department have a physician or group of physicians designated as medical director(s)?

The valid percent of "Yes" responses was 94.4. However, there were many missing responses so the value could have been as low as 52.2. Frequencies can be found in Appendix C, Table 49.

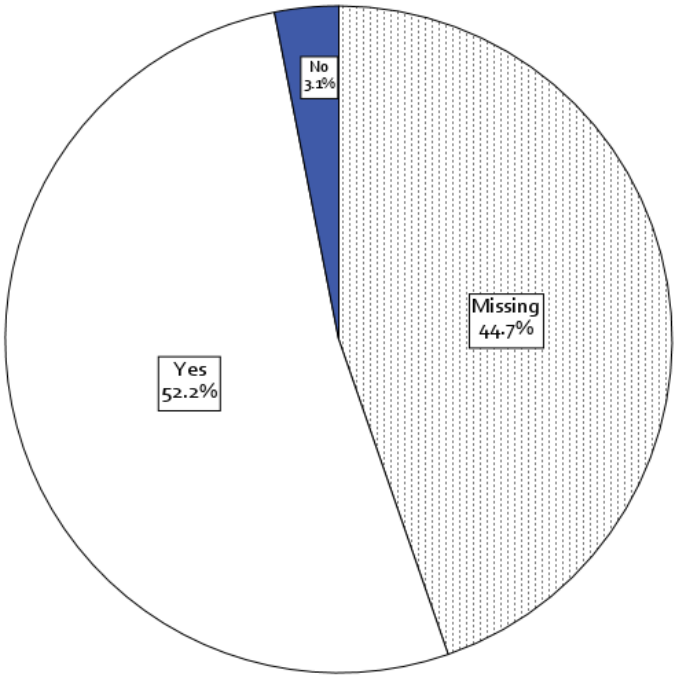


Figure 55. Distribution of medical director designation

27. Which of the following models best describes the current organization of respiratory care services in this facility?

Within this sample of hospitals, a traditional centralized organizational model was dominant. Descriptions of each model can be found in Appendix A. Frequencies can be found in Appendix C, Table 50.

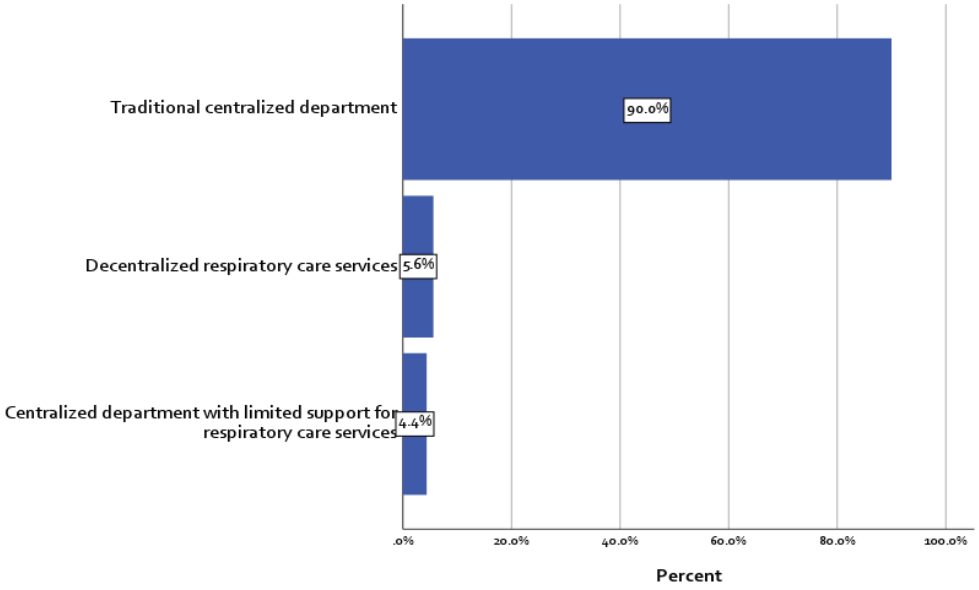


Figure 56. Distribution of organizational models

28. If a respiratory therapist attains additional certifications (e.g., intubation, ACLS), is he or she given additional clinical responsibilities in your organization?

The valid percent of "Yes" responses is 39.5. However, there were many missing responses so the value could have been as low as 22.0. Frequencies can be found in Appendix C, Table 51.

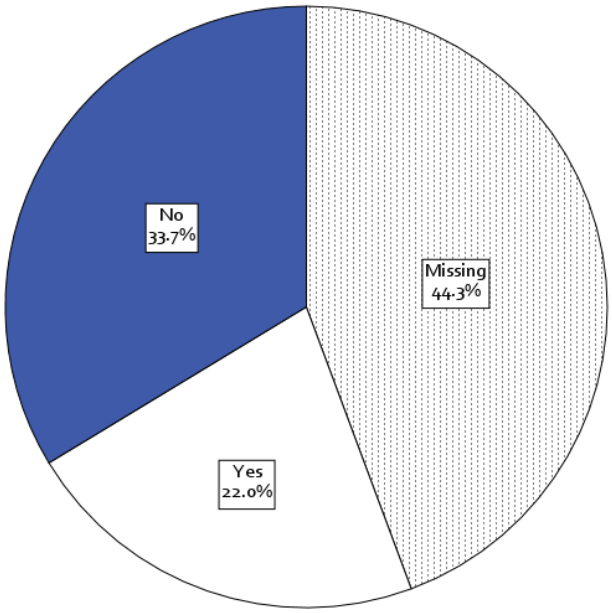


Figure 57. Distribution of additional responsibilities for additional certifications

29. Does your organization offer additional compensation for respiratory therapists who complete additional certifications (e.g., intubation, ACLS)?

The valid percent of "Yes" responses is 24.7. However, there were many missing responses so the value could have been as low as 13.7. Frequencies can be found in Appendix C, Table 52.

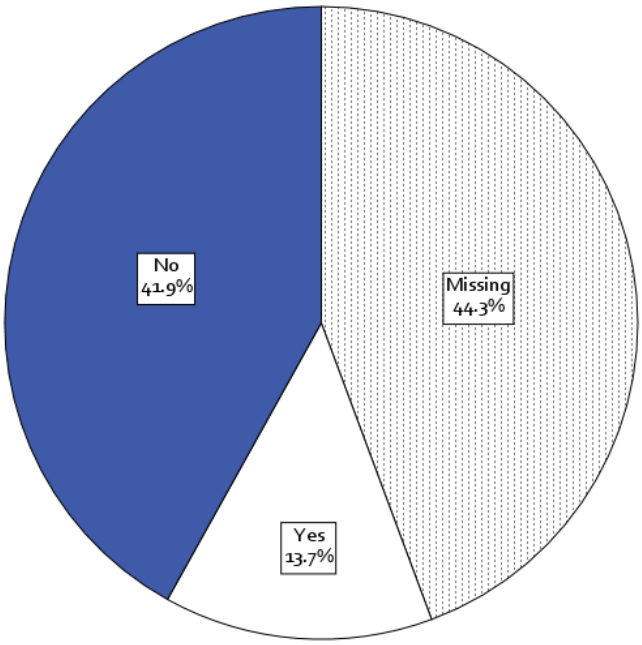


Figure 58. Distribution of additional compensation for additional certifications

30. Does your organization offer scholarships to respiratory therapy students in exchange for a commitment to employment after graduation?

The valid percent of "Yes" responses is 25.5. However, there were many missing responses so the value could have been as low as 14.1. Frequencies can be found in Appendix C, Table 53.

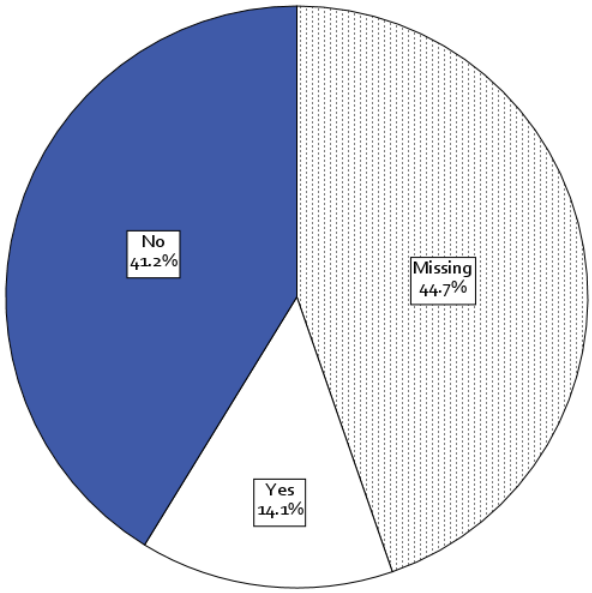


Figure 59. Distribution of scholarship offers for employment commitment

Incentives and Recruitment

31. Does your organization offer any of the following recruitment or retention incentives for respiratory care staff? *Select all that apply.*

Tuition reimbursement was the only incentive used by more than one-half of these hospitals as Figure 60 showed. Responses about "Other" recruitment tools used by respondents were documented in Appendix D.

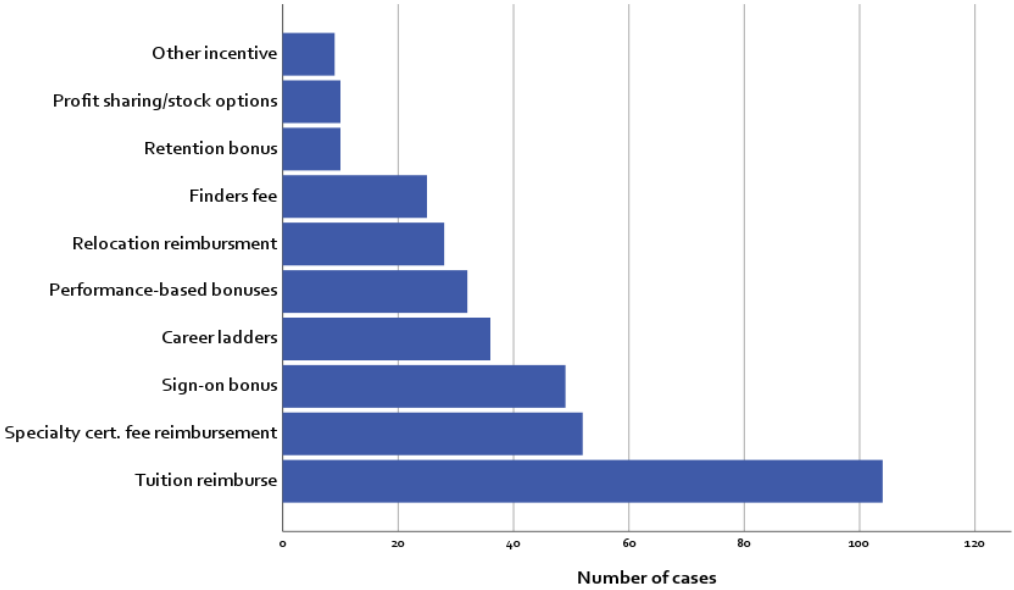


Figure 60. Recruitment/retention incentives

32. How is the availability of benefits communicated to your staff?

Most facilities used orientation materials and regular emails from the Human Resources department to communicate benefits to staff.

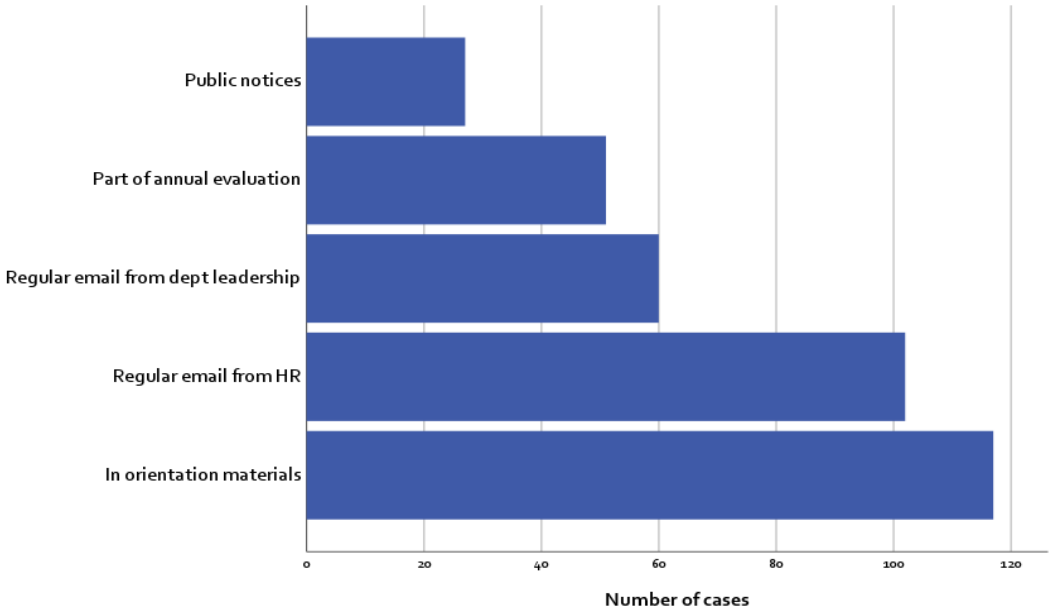


Figure 61. Methods for communicating benefits

33. Compared to the last fiscal year, has the average time needed to recruit respiratory therapists increased, decreased, or stayed the same?

The largest percentage of respiratory care departments in these hospitals reported an increase in the time needed to recruit respiratory therapists. Frequencies can be found in Appendix C, Table 54.

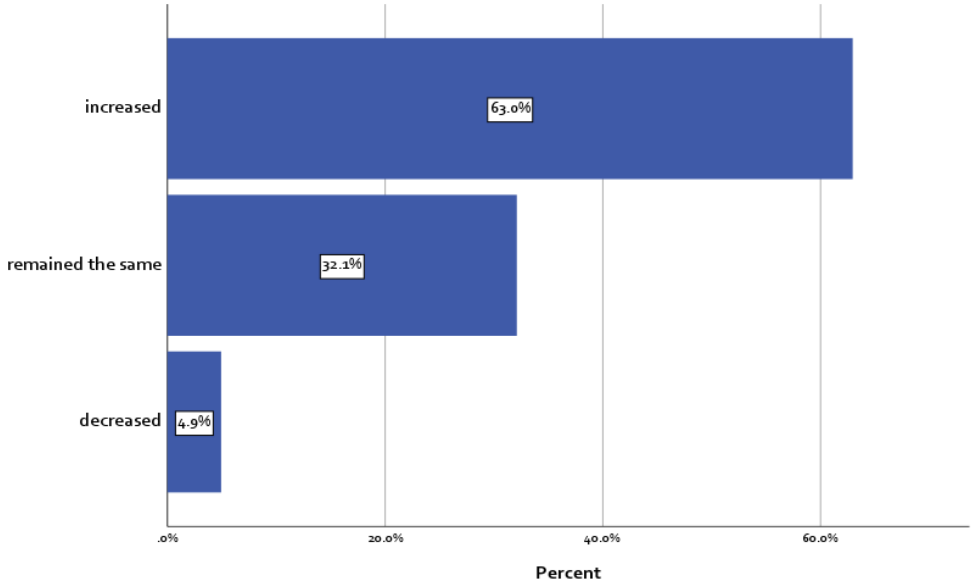


Figure 62. Time needed to recruit respiratory therapists

Turnover

34. Compared to the last fiscal year, has turnover of respiratory therapist for your organization increased, decreased or stayed the same?

The rate of turnover stayed the same as reported over half of respondents in this study. Frequencies can be found in Appendix C, Table 55.

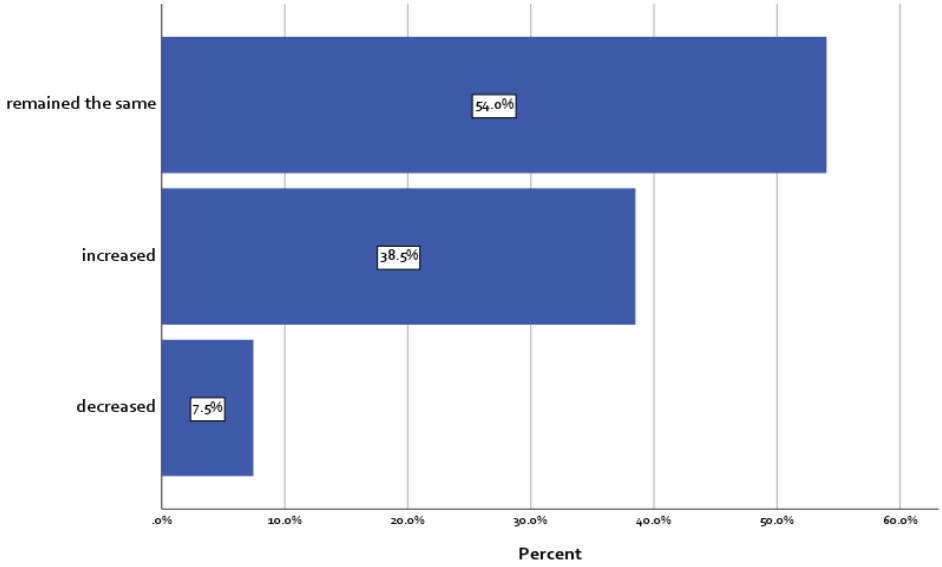


Figure 63. Turnover

Hospital and Department Size

35. How many continuous hours of respiratory care service does the organization provide each day?

Most of these hospitals provide respiratory care services throughout most or all of each day. Frequencies can be found in Appendix C, Table 56.

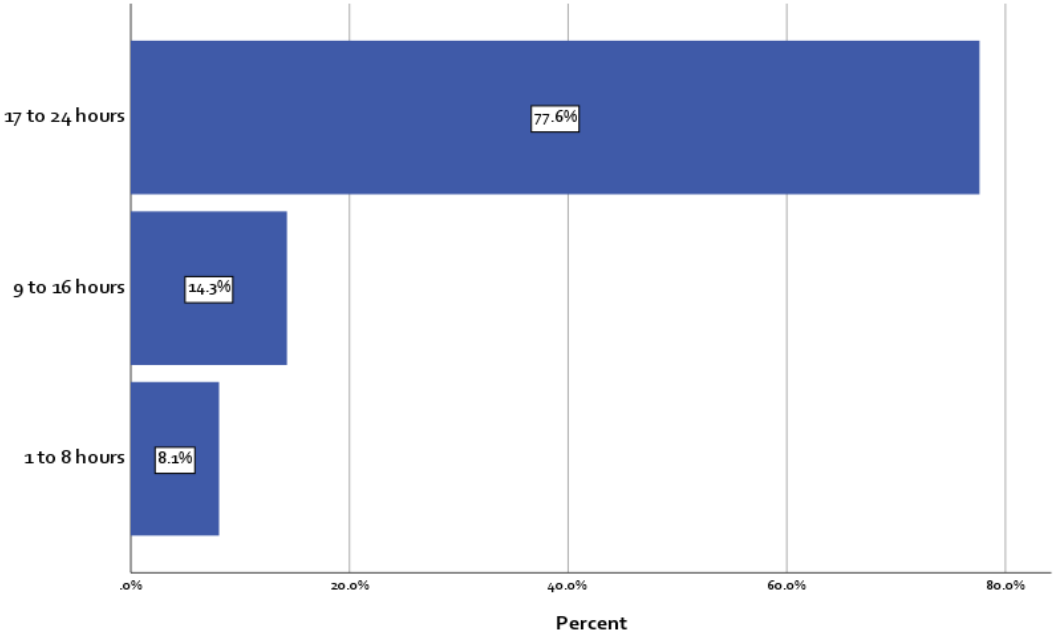


Figure 64. Continuous hours of respiratory care service

36. What is the number of staffed beds supported by this facility?

Almost half of respondents chose to skip the question summarized in Table 31. Among those who did respond, there was a broad range of facility size. Frequencies can be found in Appendix C, Table 57.

Table 31. Bed size

N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
Valid	Missing						
157	134	216.95	19.463	115	243.871	6	1,500

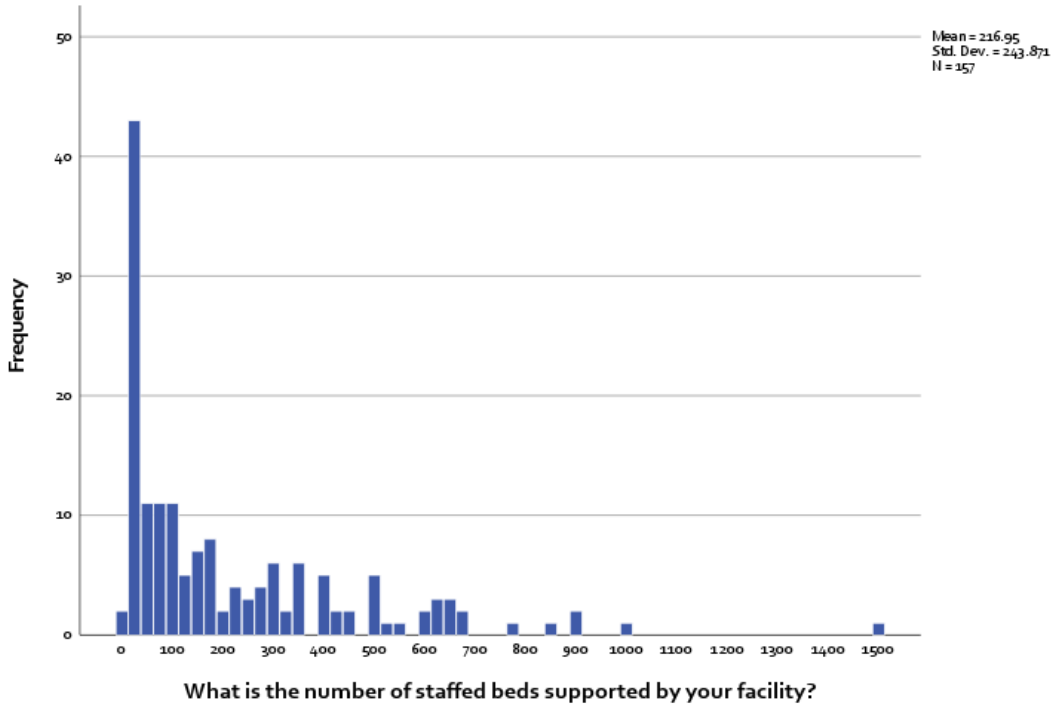


Figure 65. Bed size

37. Does your department provide a system that helps staff therapists prioritize their work assignments when there is not enough time to complete them all?

The valid percent of "Yes" responses was 73.0. However, there were many missing responses so the value could have been as low as 39.9. Frequencies can be found in Appendix C, Table 58.

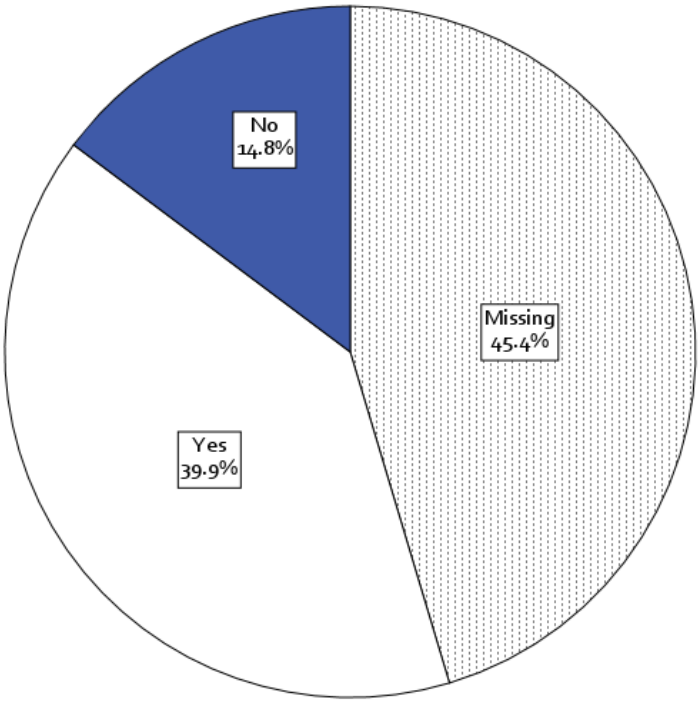


Figure 66. Availability of a work prioritization system

38. Which of the following services are provided by the Respiratory Therapy Department?

Percentages associated with services listed in Table 32 ranged from very low (actigraphy=1.3%) to very high (arterial blood gas sampling=90.6%). Eighty-three percent or more of respondents worked in hospitals that provided services in the areas of equipment cleaning and processing, participation in medical emergency (Rapid Response) teams, pulmonary function testing, and transportation of patients who were dependent on mechanical ventilation. Services provided by at least 50% of these hospitals that we have not yet mentioned included the following:

- Arterial blood gas analysis
- Assisting with bronchoscopy (with and without EBUS)
- ECGs
- Emergency intubation
- Overnight pulse oximetry
- Patient education/disease management for asthma and COPD
- Procurement and management of medical gases
- Smoking cessation instruction
- Support for high-risk births
- Transporting patients who are dependent on oxygen

Table 32. Services provided

		Responses		Percent of Cases
		N*	Percent	
	Actigraphy	2	0.1%	1.3%
	Arterial blood gas sampling	145	6.5%	90.6%
	Arterial blood gas analysis	107	4.8%	66.9%
	Arterial line insertion	28	1.2%	17.5%
	Arterial line maintenance	17	0.8%	10.6%
	Assisting with anesthesia in the operating room	8	0.4%	5.0%
	Assisting with bronchoscopy (with and without EBUS)	83	3.7%	51.9%
	Cardiology	35	1.6%	21.9%
	Case management/care plan development	47	2.1%	29.4%
	Distribution and management of portable oxygen	72	3.2%	45.0%
	EEG	40	1.8%	25.0%
	ECG	96	4.3%	60.0%
	Emergency intubation	88	3.9%	55.0%
	Equipment cleaning and processing	137	6.1%	85.6%
	Equipment repair and biomedical support	29	1.3%	18.1%
	Home care/DME	27	1.2%	16.9%
	Home sleep apnea testing	40	1.8%	25.0%
	Hyperbaric medicine	5	0.2%	3.1%
	Mask fit testing for respiratory protection	70	3.1%	43.8%
	Metabolic monitoring	19	0.8%	11.9%
	Neurodiagnostics	21	0.9%	13.1%

		Responses		Percent of Cases
		N*	Percent	
	Overnight pulse oximetry	122	5.4%	76.3%
	Participation in Medical Emergency (Rapid Response) team	133	5.9%	83.1%
	Patient education/disease management for asthma and COPD	119	5.3%	74.4%
	Perfusion/ECMO	10	0.4%	6.3%
	Physiologic monitoring	24	1.1%	15.0%
	Procurement and management of medical gases	89	4.0%	55.6%
	Pulmonary function testing	139	6.2%	86.9%
	Pulmonary rehabilitation	57	2.5%	35.6%
	Smoking cessation instruction	95	4.2%	59.4%
	Staffing for skilled nursing/rehab/LTAC	16	0.7%	10.0%
	Support for high-risk births	88	3.9%	55.0%
	Telemedicine/teleheath	14	0.6%	8.8%
	Transporting patients who are dependent on oxygen	82	3.7%	51.2%
	Transporting patients who are dependent on mechanical ventilation	136	6.1%	85.0%
	Ultrasound diagnostics	3	0.1%	1.9%
Total		2243	100.0%	1401.9%

*Respondents were allowed to select all that applied. Therefore, the sum of row frequencies exceeds 291.

39. To what degree is increasing the proportion of baccalaureate-prepared respiratory therapists a goal of your department?

Respondents were presented with a sliding scale tool and asked to provide a response between 0 (Low priority) and 100 (High priority). Nearly half of respondents left this question unanswered. While there were several respondents who indicated this was of the highest priority, the modal response was zero plus the mean and median were 34 and 25, respectively. Frequencies can be found in Appendix C, Table 59.

Table 33. Degree to which increasing proportion of baccalaureate-prepared therapists is a goal of the department

N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
Valid	Missing						
162	129	34.22	2.675	25	34.052	0	100

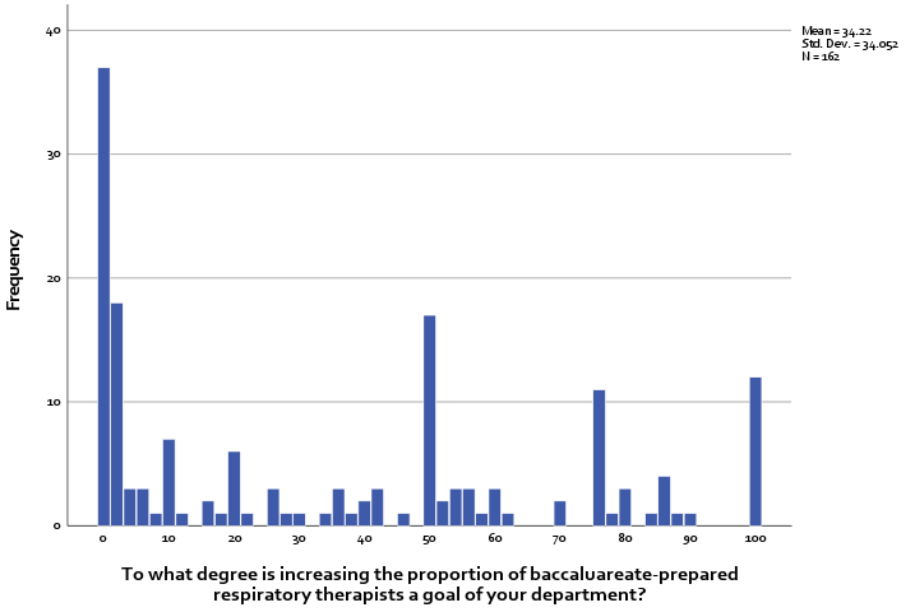


Figure 67. Degree to which increasing baccalaureate-prepared therapists is a goal of the department

40. Does your department differentiate work assignments based on whether staff therapists have earned the CRT or RRT credential?

The valid percent of “Yes” responses was 20.4. However, there were many missing responses so the percent could have been as low as 11.3. Frequencies can be found in Appendix C, Table 60.

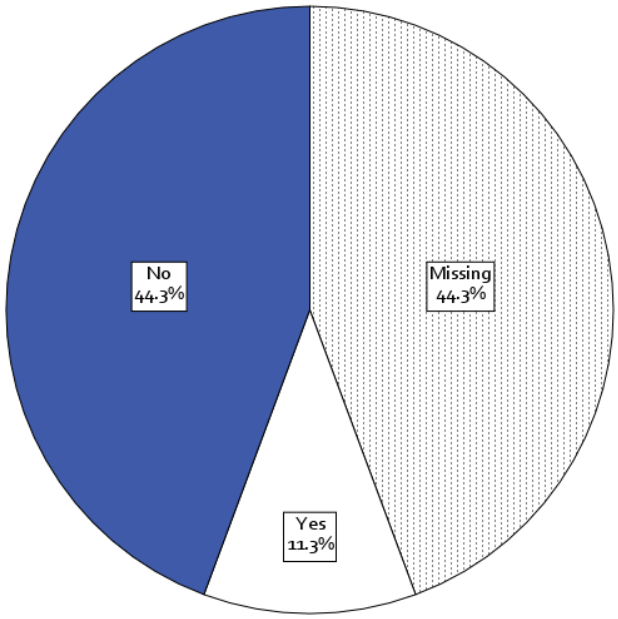


Figure 68. Differentiation of work assignments based on credential

41. Does your department exclusively staff therapists with the RRT credential?

The valid percent of “Yes” responses was 38.9. However, there were many missing responses so the percent could have been as low as 21.6. Frequencies can be found in Appendix C, Table 61.

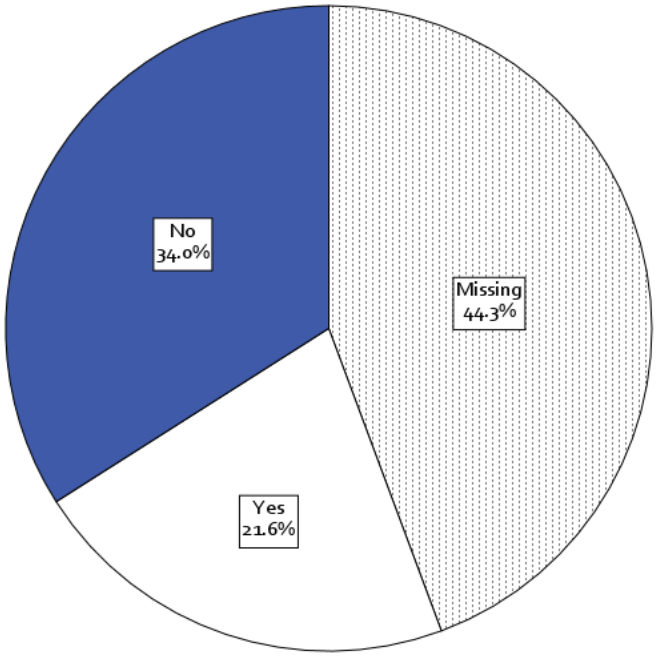


Figure 69. RRT Requirement for employment

42. Are new graduates required to attain the RRT credential within a predetermined time after the start of their employment with your organization?

The valid percent of "Yes" responses was 58.6. However, there were many missing responses so the percentage could have been as low as 32.6. Frequencies can be found in Appendix C, Table 62.

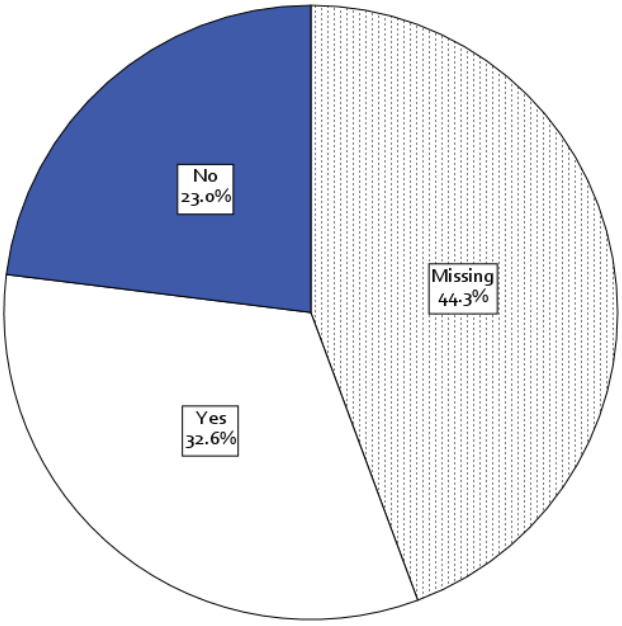


Figure 70. RRT attainment requirement

43. Upon hire, what is the time frame in which a new graduate is required to attain the RRT?

Respondents who had positively responded to the previous question were asked to specify how long new hires were given to achieve the RRT. Most organizations required therapists to earn the credential within a year of hire. Frequencies can be found in Appendix C, Table 63. Other' responses can be found in Appendix D.

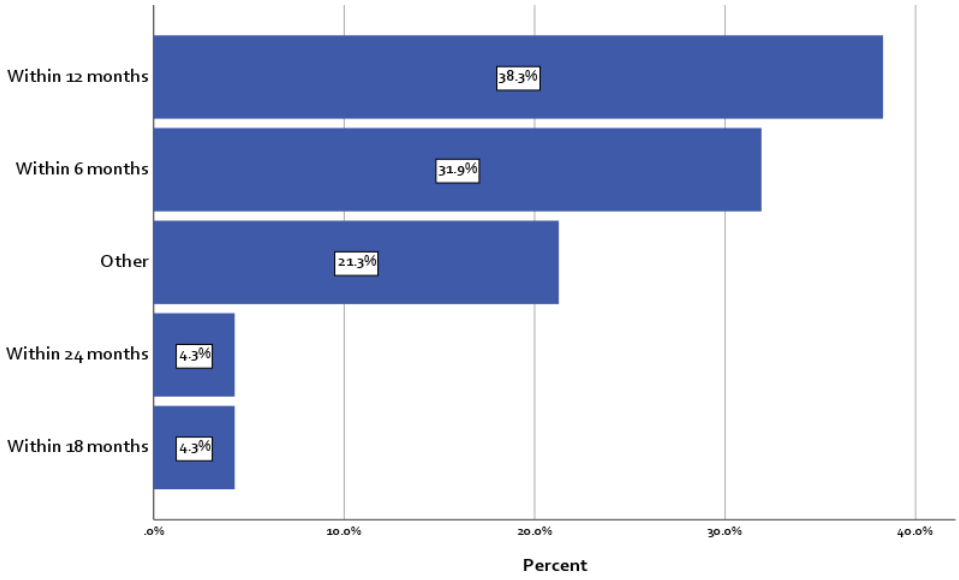


Figure 71. Time frame to earn RRT credential after hire

44. Were individuals in your hospital trained in respiratory therapy extender roles in response to the COVID pandemic?

The valid percent of "Yes" responses was 45.3. However, there were many missing responses so the percentage could have been as low as 24.7. Frequencies can be found in Appendix C, Table 64.

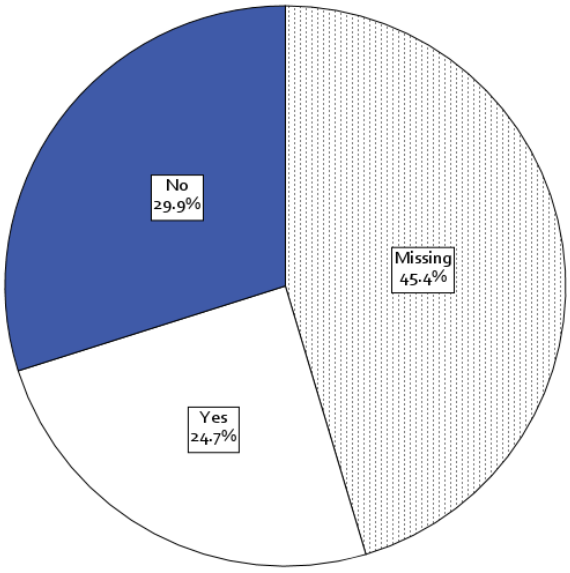


Figure 72. Training in extender roles in response to COVID pandemic

45. Did your hospital receive ventilators from the federal Strategic National Stockpile (SNS)?

The valid percent of "Yes" responses was 23.9. However, there were many missing responses so the percentage could have been as low as 13.1. Frequencies can be found in Appendix C, Table 65.

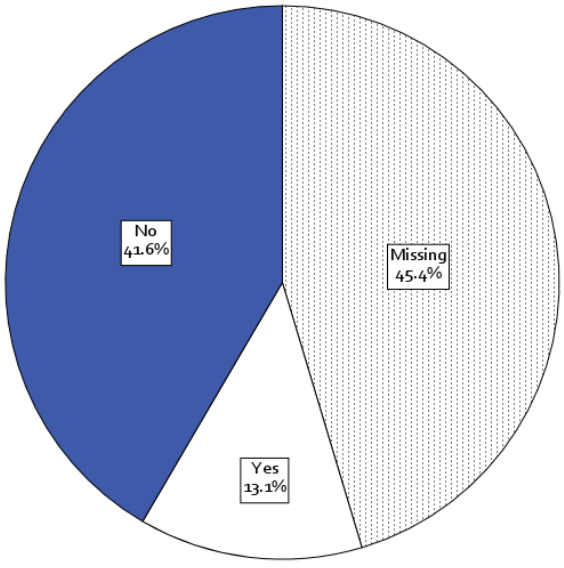


Figure 73. Receipt of ventilators from the Strategic National Stockpile (SNS)

46. In 2020, did a COVID pandemic-related surge in the number of patients at your hospital exceed the number of available beds?

The valid percent of “Yes” responses was 17.4. However, there were many missing responses so the percentage could have been as low as 9.6. Frequencies can be found in Appendix C, Table 66.

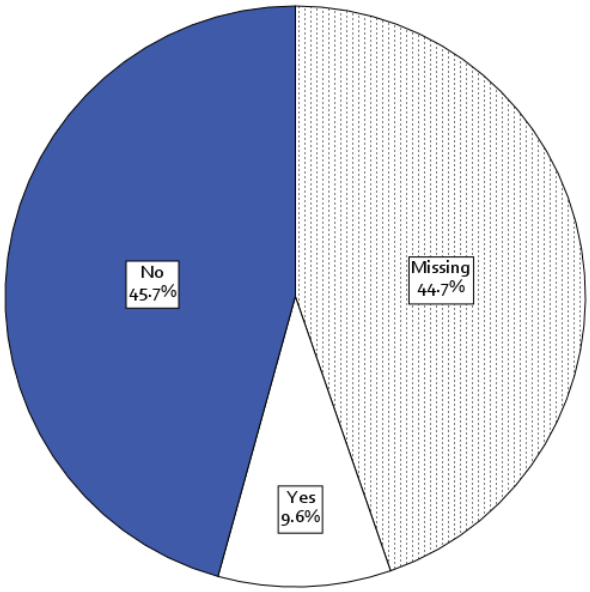


Figure 74. Patient levels exceeded bed capacity due to COVID pandemic

47. In 2020, did a COVID pandemic-related surge in the number of patients at your hospital exceed the available equipment?

The valid percent of “Yes” responses was 26.9. However, there were many missing responses so the percentage could have been as low as 14.8. Frequencies can be found in Appendix C, Table 67.

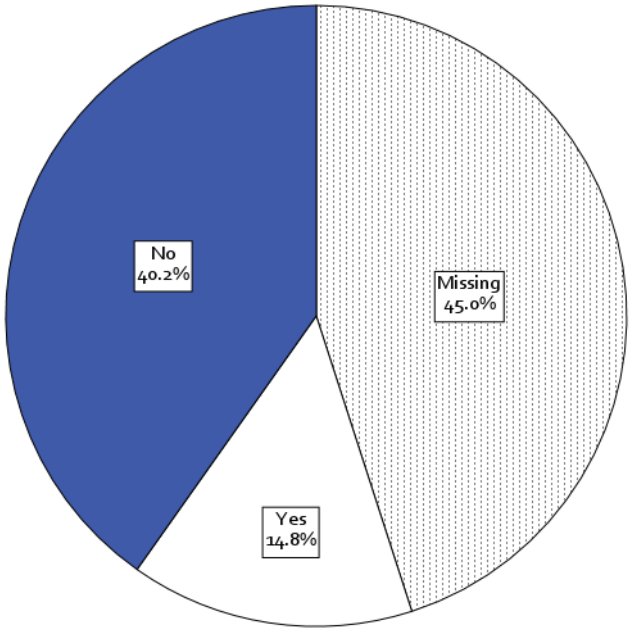


Figure 75. Patient levels exceeded equipment capacity due to COVID pandemic

48. In 2020, did a COVID pandemic-related surge in the number of patients at your hospital exceed the available staff?

The valid percent of “Yes” responses was 30.9. However, there were many missing responses so the percentage could have been as low as 17.2. Frequencies can be found in Appendix C, Table 68.

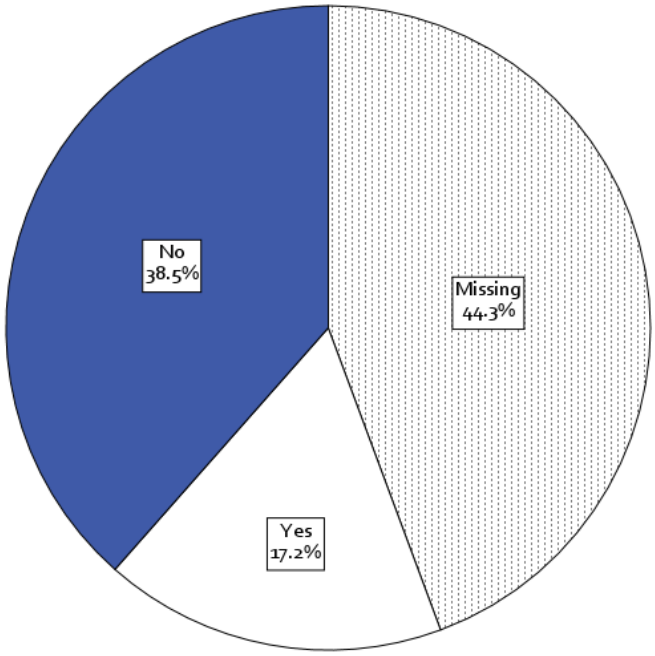


Figure 76. Patient levels exceeded staff capacity due to COVID pandemic

49. Were temporary staff used when patient levels exceeded available staff?

Respondents who indicated in the previous question that patient levels had exceeded staff capacity were then asked whether temporary staff were used to fill the gaps. Of those who were asked to respond to this question, 53% indicated that temporary staff had been utilized. Frequencies can be found in Appendix C, Table 69.

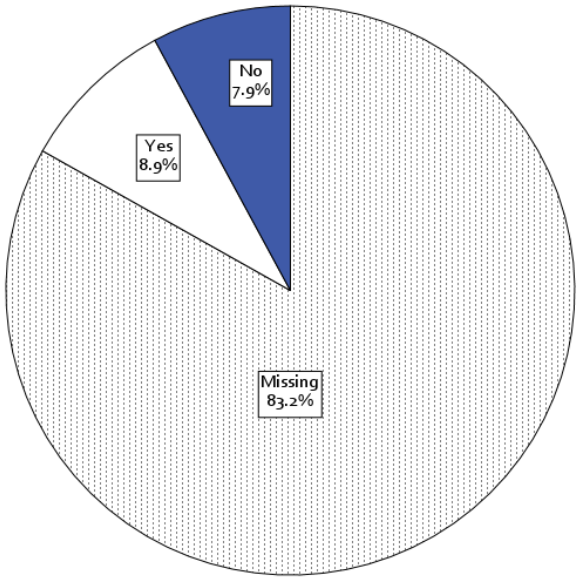


Figure 77. Temporary staff used when patient levels exceeded available staff

50. How many respiratory therapists (number of therapists – not FTEs) <u>voluntarily</u> vacated a job position due to the COVID pandemic?

Most hospitals did not have any therapists who left voluntarily because of the COVID pandemic. As before, we produced a second table (Table 35) that reduced estimates for overtime assuming that some people skipped this question rather than enter a value of zero when they knew that none of the therapists from their facility had left due to the COVID pandemic. Frequencies can be found in Appendix C, Table 70 and Table 71.

Table 34. First estimate for therapists who voluntarily vacated a position due to COVID

	N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
	Valid	Missing						
Full-time therapists who voluntarily vacated a position due to COVID	145	146	.60	.11	0	1.33	0	10
Part-time therapists who voluntarily vacated a position due to COVID	126	165	.35	.08	0	.85	0	6

Table 35.Conservative estimate for therapists who voluntarily vacated a position due to COVID

	N		Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
	Valid	Missing						
Full-time therapists who voluntarily vacated a position due to COVID	291	0	.30	.06	0	.98	0	10
Part-time therapists who voluntarily vacated a position due to COVID	291	0	.15	.03	0	.59	0	6

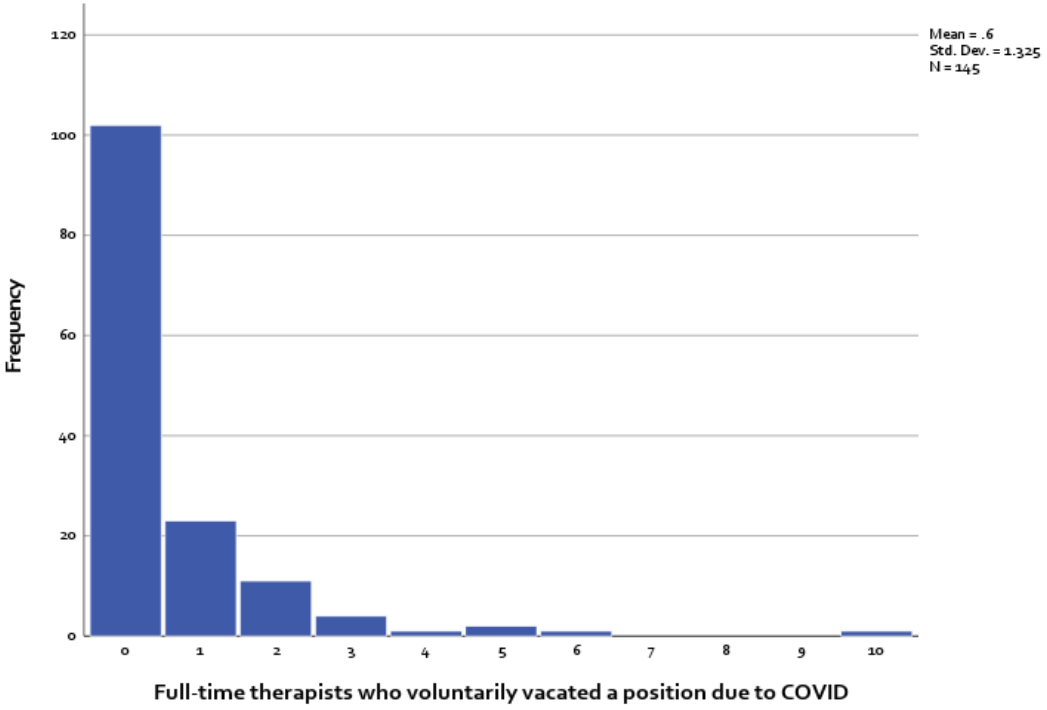


Figure 78. Full-time therapists who voluntarily vacated a position due to COVID

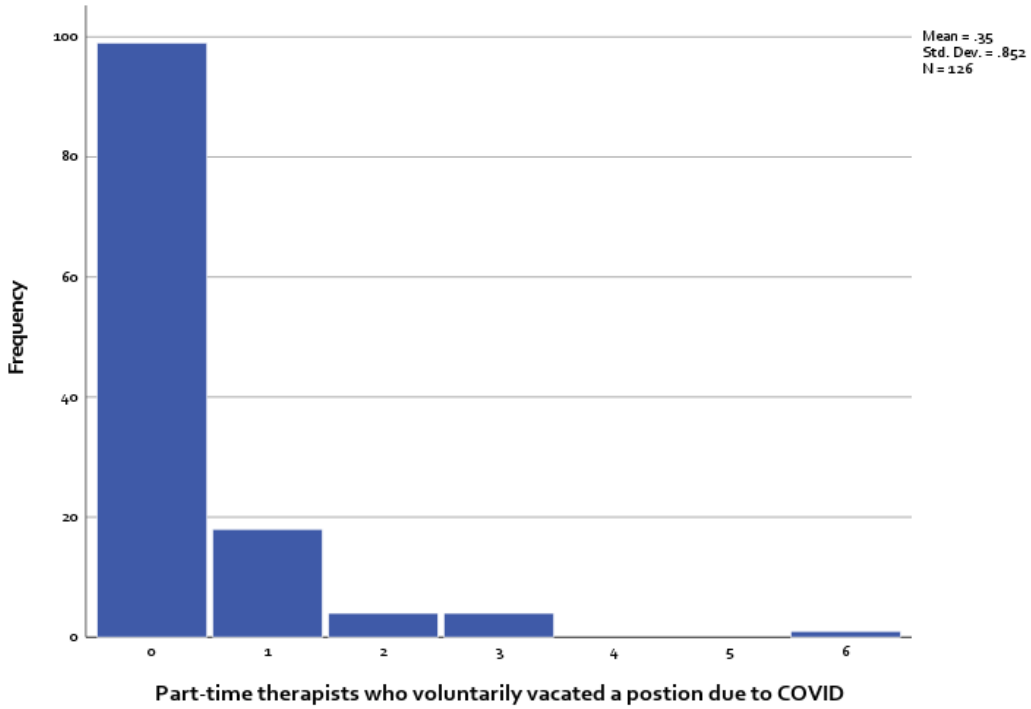


Figure 79. Part-time therapists who voluntarily vacated a position due to COVID

51. Has workforce or payroll in your department been impacted by the COVID pandemic?

The valid percent of "Yes" responses was 61.7. However, there were many missing responses so the percentage could have been as low as 34.4. Frequencies can be found in Appendix C, Table 72.

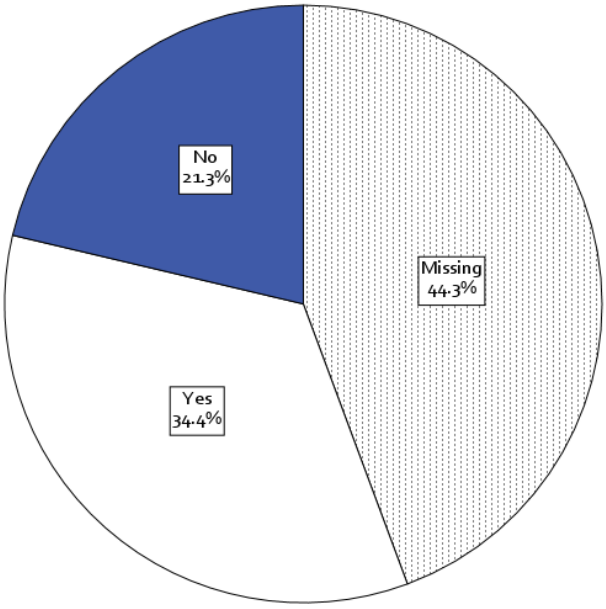


Figure 80. Workforce/payroll impact by COVID pandemic

52. In what ways has the COVID pandemic impacted your department workforce or payroll? Select all that apply.

Respondents who had indicated in the previous question that the COVID pandemic had affected their department's workforce or payroll were asked to specify those impacts. Most respondents indicated an increase in unbudgeted overtime.

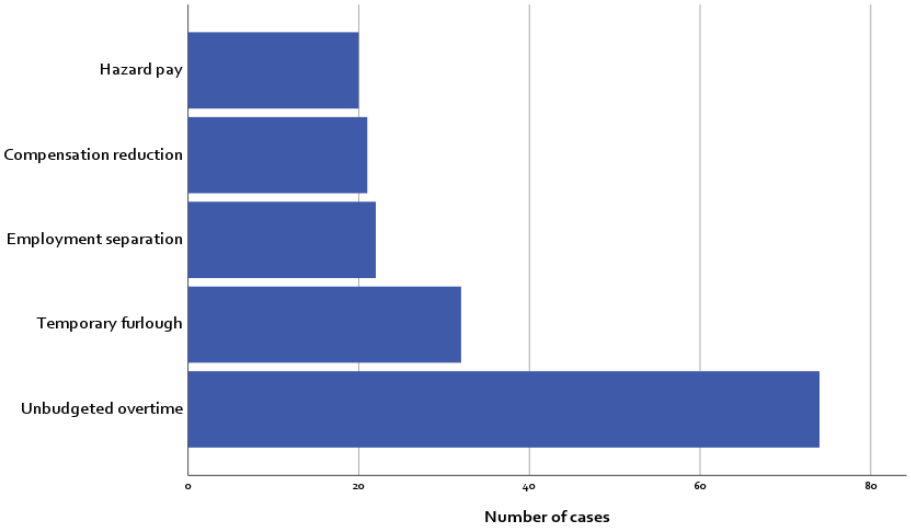


Figure 81. Impacts of COVID pandemic on workforce/payroll

53. How many respiratory therapists (number of therapists – not FTEs) vacated a position during the last fiscal year?

There were no significant differences among regional groups for full time or part time respiratory therapists who vacated a position during the last fiscal year across regions.

Table 36. Therapists who vacated a position by region

Region	N		Mean	Median	Minimum	Maximum	Std. Error of Mean	Std. Deviation
	Valid	Missing						
Full Time								
Northeast	29	21	2.93	2.00	0	25	.882	4.750
South	59	30	3.10	2.00	0	17	.492	3.782
Midwest	82	43	2.80	1.00	0	19	.463	4.194
West	23	3	2.30	2.00	0	7	.410	1.964
F=.232, df=3,192, p=.874, eta squared=.004								
Part Time								
Northeast	26	24	1.58	1.00	0	8	.408	2.082
South	50	39	1.02	.00	0	7	.226	1.597
Midwest	72	53	1.19	.00	0	12	.249	2.114
West	17	9	1.24	1.00	0	3	.304	1.251
F=.497, df=3,164, p=.685, eta squared=.009								

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

54. What is the number of staffed beds supported by your facility?

We divided responses regarding the number of staffed beds into 3 subgroups (Less than 50, 50-200, More than 200). According to Table 38, significance testing for differences among observed and expected counts in the cells outlined in bold within Table 37 found important differences. Each expected count showed what one should expect to observe when there was no significant difference in the frequency of occurrence between bed size and urban/rural settings.

The adjusted residual value showed the number of standard deviations away from the expected count that the observed count fell. The adjusted residual values for small- and large-sized facilities exceeded 2.0, so those cells contained an important differential between observed and expected counts.

Hospitals of small and medium size occurred more frequently in rural geographic settings than in urban settings. Hospitals of large size occurred more frequently in urban settings.

Table 37. Staffed bed subgroups by community type

			Community type		
			Rural	Urban	Total
What is the number of staffed beds supported by your facility?	Less than 50	Count	42	3	45
		Expected Count	33.2	11.8	45.0
		% of Total	26.8%	1.9%	28.7%
		Adjusted Residual	3.5	-3.5	
	50 to 200	Count	43	11	54
		Expected Count	39.9	14.1	54.0
		% of Total	27.4%	7.0%	34.4%
		Adjusted Residual	1.2	-1.2	
	More than 200	Count	31	27	58
		Expected Count	42.9	15.1	58.0
		% of Total	19.7%	17.2%	36.9%
		Adjusted Residual	-4.5	4.5	
Total		Count	116	41	157
		Expected Count	116.0	41.0	157.0
		% of Total	73.9%	26.1%	100.0%

Table 38. Statistical significance for staffed beds by urban/rural

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22.300[a]	2	.000
Likelihood Ratio	23.549	2	.000
Linear-by-Linear Association	21.451	1	.000
N of Valid Cases	157		

*0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.75.

Summary of Yes-No Responses

This survey relied on several questions in which respondents were prompted to select “Yes” or “No.” Some chose not to respond, which represented a third response. The following table summarized these responses by giving a high and low estimate for the percentage of “Yes” responses that were reported for each question.

The high estimate was the valid percent value, which assumed that those who left the question without a response were equally likely to have selected “Yes” or “No.” The low estimate assumed that respondents skipped the question when it did not apply to them rather than select “No.” The truth most likely was somewhere between the low and high estimate of each question, which was why we have summarized them here.

Lastly, we rank ordered these responses from high to low based on the value for the high estimate for the percent for which the question was true.

Table 39. Low and high estimates for affirmative responses to survey items limited to Yes and No

Question from the survey	Estimates of the percent for which this is true?	
	Low	High
Does the respiratory therapy department have a physician or group of physicians designated as medical director(s)?	52.2	94.4
Does your organization use any protocols to deliver respiratory care?	43.0	76.2
Assuming you are the Director/Manager of respiratory care services, does the administrative officer to whom you report have a clinical background?	41.2	73.6
Does your department routinely measure the productivity of respiratory therapists?	41.6	73.3
Does your department provide a system that helps staff therapists prioritize their work assignments when there is not enough time to complete them all?	39.9	73.0
Has workforce or payroll in your department been impacted by the COVID pandemic	34.4	61.7
Are new graduates required to attain the RRT credential within a predetermined time after the start of their employment with your organization?	32.6	58.6
Is your department required to benchmark selected productivity or quality metrics against departments of comparable hospitals?	30.2	55.0
Were individuals in your hospital trained in respiratory therapy extender roles in response to the COVID pandemic	24.7	45.3
If a respiratory therapist attains additional certifications (e.g., intubation, ACLS), is he or she given additional clinical responsibilities in your organization?	22.0	39.5
Does your department exclusively staff therapists with the RRT credential?	21.6	38.9
In 2020, did a COVID pandemic-related surge in the number of patients at your hospital exceed the available staff?	17.2	30.9
Is this facility designated as a Critical Access Hospital by CMS?	29.2	29.6
In 2020, did a COVID pandemic-related surge in the number of patients at your hospital exceed the available equipment?	14.8	26.9
Does your organization offer scholarships to respiratory therapy students in exchange for a commitment to employment after graduation?	14.1	25.5
Does your organization offer additional compensation for respiratory therapists who complete additional certifications (e.g., intubation, ACLS)?	13.7	24.7
Did your hospital receive ventilators from the federal Strategic National Stockpile (SNS)?	13.1	23.9
Does your department differentiate work assignments based on whether staff therapists have earned the CRT and RRT credentials?	11.3	20.4
In 2020, did a COVID pandemic-related surge in the number of patients at your hospital exceed the number of available beds?	9.6	17.4

Appendix A. Human Resource Survey of Acute Care Hospitals

2020 AARC Human Resource Survey of Acute Care Hospitals

Hospital Information

1. **What is the zip code of the organization for which respiratory care services are provided?**

2. ***Definition: A Critical Access Hospital (CAH) is limited in size to 25 beds. Typical hospital stays are short. CAHs are at least a 35-mile drive away from other hospitals.***

Is this facility designated as a Critical Access Hospital by CMS?

- ○ Yes
- ○ No

3. **For how many cost centers is the Respiratory Therapy Manager responsible?**

Please provide a numeric response e.g., 2, not two.

4. **Please indicate the departments for which the Respiratory Therapy Manager is responsible.**

- ☐ Respiratory Care
- ☐ Cardiac Rehabilitation
- ☐ Interventional Cardiology
- ☐ Interventional Pulmonary (e.g., bronchoscopy)
- ☐ Neurodiagnostics
- ☐ Pulmonary Function Lab
- ☐ Pulmonary Rehabilitation
- ☐ Sleep Medicine
- ☐ Other (please specify)

FTEs

5. **What is the total number of FTEs employed in both therapist and other positions, for which the Respiratory Therapy Department Director is responsible? (e.g., 56.5)**

Please use the following table as a guide:

Hours/Week (range)	FTEs
37 or more	1.0
29-36	0.8
21-28	0.6
13-20	0.4
5-12	0.2

6. **How many FTEs does your organization budget or contract for Staff Therapist positions held by respiratory therapists *this fiscal year*? (e.g., 56.5)**

Please use the following table as a guide:

Hours/Week (range)	FTEs
37 or more	1.0
29-36	0.8
21-28	0.6
13-20	0.4
5-12	0.2

7. **How many FTEs does your organization budget or contract for the following job titles for positions held by respiratory therapists *this fiscal year? (e.g., 1.0)***

Please use the following table as a guide:

Hours/Week (range)	FTEs
37 or more	1.0
29-36	0.8
21-28	0.6
13-20	0.4
5-12	0.2

Director/Manager - A Director is defined as a respiratory therapist who is the top manager of this department

Supervisor - A Supervisor is defined as a respiratory therapist other than the director who evaluates the performance of other employees

Non-supervisory, management support staff who are respiratory therapists, but are not included in other titles (e.g. clinical specialist, research coordinator)

Sleep Technologist/Specialist

Pulmonary Function Technologist

Other diagnostic technologist (e.g., noninvasive cardiology)

Department Educator - A Department Educator is defined as the person who coordinates continuing education and staff development

Disease Manager/Patient Educator

Vacancies

8. **How many FTE positions held by respiratory therapists did the organization typically supplement from non-employee pools, or from outside temporary staffing agencies *this fiscal year* for Staff Therapists? (e.g., 1.8)**

Please use the following table as a guide:

Hours/Week (range)	FTEs
37 or more	1.0
29-36	0.8
21-28	0.6
13-20	0.4
5-12	0.2

9. **How many FTEs to be held by respiratory therapists does the organization have vacant for Staff Therapists? (e.g., 6.5)**

Please use the following table as a guide:

Hours/Week (range)	FTEs
37 or more	1.0
29-36	0.8
21-28	0.6
13-20	0.4
5-12	0.2

10. **How many FTEs to be held by respiratory therapists does the organization have vacant for the following job titles? (e.g., 1.0)**

Please use the following table as a guide:

Hours/Week (range)	FTEs
37 or more	1.0
29-36	0.8
21-28	0.6
13-20	0.4
5-12	0.2

Director/Manager - A Director is defined as a respiratory therapist who is the top manager of this department

Supervisor - A Supervisor is defined as a respiratory therapist other than the director who evaluates the performance of other employees

Non-supervisory, management support staff who are respiratory therapists, but are not included in other titles (e.g. clinical specialist, research coordinator)

Sleep Technologist/Specialist

Pulmonary Function Technologist

Other diagnostic technologist (e.g., noninvasive cardiology)

Department Educator - A Department Educator is defined as the person who coordinates continuing education and staff development

Disease Manager/Patient Educator

Future

11. **How many FTEs to be held by respiratory therapists does the organization expect to employ *for the year 2021* for Staff Therapists? (e.g., 56.5)**

Please use the following table as a guide:

Hours/Week (range)	FTEs
37 or more	1.0
29-36	0.8
21-28	0.6
13-20	0.4
5-12	0.2

12. **How many FTEs to be held by respiratory therapists does the organization expect to employ *for the year 2021* for the following tob titles? (e.g., 1.0)**

Please use the following table as a guide:

Hours/Week (range)	FTEs
37 or more	1.0
29-36	0.8
21-28	0.6
13-20	0.4
5-12	0.2

Director/Manager - A Director is defined as a respiratory therapist who is the top manager of this department

Supervisor - A Supervisor is defined as a respiratory therapist other than the director who evaluates the performance of other employees

Non-supervisory, management support staff who are respiratory therapists, but are not included in other titles (e.g. clinical specialist, research coordinator)

Sleep Technologist/Specialist

Pulmonary Function Technologist

Other diagnostic technologist (e.g., noninvasive cardiology)

Department Educator - A Department Educator is defined as the person who coordinates continuing education and staff development

Disease Manager/Patient Educator

Last Fiscal Year

13. **How many respiratory therapists (number of therapists - not FTEs) were employed on the last day of the last fiscal year? (e.g., 39, 73)**

Full-time as defined by your institution

Part-time

14. **How many respiratory therapists (number of therapists - not FTEs) vacated a job position during the last fiscal year? (e.g., 5, 15)**

Full-time as defined by your institution

Part-time

Hourly Pay Rate

15. **What is the average hourly wage, including any differentials, for respiratory therapists employed by the organization in the following job titles?**

Please type your responses without a dollar sign ($), e.g., 24.00 or 36.15.

Staff Therapist

Director/Manager - A Director is defined as a respiratory therapist who is the top manager of this department

Supervisor - A Supervisor is defined as a respiratory therapist other than the director who evaluates the performance of other employees

Non-supervisory, management support staff who are respiratory therapists, but are not included in other titles (e.g. clinical specialist, research coordinator)

Sleep Technologist/Specialist

Pulmonary Function Technologist

Other diagnostic technologist (e.g., noninvasive cardiology)

Department Educator - A Department Educator is defined as the person who coordinated continuing education and staff development

Disease Manager/Patient Educator

16. **What is the average hourly pay rate, including any differentials, for respiratory therapists who are new graduates of Associate degree programs? (e.g., 24.25)**

17. **What is the average hourly pay rate, including any differentials, for respiratory therapists who are new graduates of Baccalaureate degree programs? (e.g., 24.25)**

The intent behind this question is to learn about therapists who enter practice directly after completing a respiratory therapy program that awards a Baccalaureate degree.

18. **What is the average hourly pay rate, including any differentials, for respiratory therapists who are new graduates of Master's degree programs? (e.g., 24.25)**

The intent behind this question is to learn about therapists who enter practice directly after completing a respiratory therapy program that awards a Master's degree.

19. **Indicate the number of respiratory therapists FTEs who separated employment from your organization in the last fiscal year for the reasons listed below.**

Please use the following table as a guide:

Hours/Week (range)	FTEs
37 or more	1.0
29-36	0.8
21-28	0.6
13-20	0.4
5-12	0.2

Retirement

Voluntary separation

Involuntary separation for inadequate performance

Involuntary separation because of a workforce reduction (layoff)

20. **What <u>percentage</u> of hours worked by respiratory therapists were paid as overtime in the last fiscal year?**

21. **Is your department required to benchmark selected productivity or quality metrics against departments of comparable hospitals?**

- ◯ Yes
- ◯ No

22. **How many hours does it typically take to orient a new respiratory therapist in your organization?**

Please enter a number between 1 and 1200.

* 23. **Does your department routinely measure the productivity of respiratory therapists?**

- Yes
- No

Productivity

24. **Which of the following is used to measure productivity in your institution?**

Select all that apply.

- [ ] Relative value units (RVUs)
- [ ] Charges
- [ ] Procedures
- [ ] Patient days
- [ ] Other (please specify)

Protocols

Definition: A protocol is defined as Initiation or modification of a patient care plan following a predetermined structured set of physician orders, instructions or interventions in which the therapist is allowed to initiate, discontinue, refine, transition, or restart therapy as the patient's medical condition dictates.

Note: This definition should not be confused with programs that include discontinuation of therapy without a reorder, flagging therapy for physician reorder, standing orders or policies that dictate therapy durations.

* 25. **Does your organization use any protocols to deliver respiratory care?**

- ◯ Yes
- ◯ No

Protocols

26. **What types of protocols are used by respiratory therapists in your organization?**

Select all that apply.

- [ ] Oxygen
- [ ] Bronchial Hygiene
- [ ] Lung Hyperinflation
- [ ] Bronchodilator Therapy
- [ ] Disease-based (e.g., asthma, COPD)
- [ ] Mechanical Ventilation

* 27. **Assuming you are the Director/Manager of respiratory care services, does the administrative officer to whom you report have a clinical background?**

- ◯ Yes
- ◯ No

28. **Assuming you are the Director/Manager of respiratory care services, what is the clinical background of the administrative officer to whom you report?**

- ◯ Clinical Laboratory Scientist
- ◯ EMT/Paramedic
- ◯ Nurse
- ◯ Non-Physician Provider (APRN, Nurse Practitioner, Physician Assistant)
- ◯ Pharmacist
- ◯ Physician
- ◯ Radiologic Technologist
- ◯ Physical Therapist
- ◯ Respiratory Therapist
- ◯ Other (please specify)

Respiratory Department

29. **Does the respiratory therapy department have a physician or group of physicians designated as medical director(s)?**

- ◯ Yes
- ◯ No

30. **Which of the following models best describes the current organization of respiratory care services in the facility?**

- ◯ **A**- Most closely resembles a traditional centralized department. An administrative leader and medical director(s) supervise the work of therapists assigned to the department, as well as establish and monitor respiratory care standards. This department generally provides respiratory care services throughout the facility.
- ◯ **B** - A centralized department that provides limited support for delivery of respiratory care services. Administrative leadership and medical direction responsibilities are the same as described in Model A. However, some therapists have been decentralized. The work of these decentralized therapists is primarily supervised by a manager of the unit in which these therapists are assigned, although leaders of the respiratory care department may share responsibility.
- ◯ **C** - Respiratory care services are totally decentralized in that they are not supported by a central department. Responsibility for establishing and monitoring respiratory care standards principally resides with leaders of units in which respiratory care services are provided. Respiratory care services may be provided by therapists and/or other caregivers.

Certifications and Recruitment

31. **If a respiratory therapist attains additional certifications (e.g., intubation, ACLS), are they given additional clinical responsibilities in your organization?**

- ◯ Yes
- ◯ No

32. **Does your organization offer additional compensation for respiratory therapists who complete additional certifications (e.g., intubation, ACLS)?**

- ◯ Yes
- ◯ No

33. **Does your organization offer scholarships to respiratory therapy students in exchange for a commitment to employment after graduation?**

- ◯ Yes
- ◯ No

34. **Does your organization offer any of the following recruitment or retention incentives for respiratory care staff?**

Select all that apply.

- ☐ Career ladders
- ☐ Finders fee
- ☐ Performance-based bonuses
- ☐ Profit sharing/Stock options
- ☐ Relocation expense reimbursement
- ☐ Retention bonuses
- ☐ Sign-on bonus
- ☐ Specialty certification fee reimbursement (e.g., AE-C, CPFT, CRT-SDS, RRT-NPS)
- ☐ Tuition reimbursement
- ☐ Other (please specify)

35. **How is the availability of benefits communicated to your staff?**

Select all that apply.

- [ ] As a part of annual evaluations
- [ ] In orientation materials
- [ ] Public notices
- [ ] Regular email communication from department leadership
- [ ] Regular email communication from Human Resources

36. **Compared to the last fiscal year, has the average time needed to recruit respiratory therapists**

- ◯ increased,
- ◯ decreased, or
- ◯ remained the same.

37. **Compared to the last fiscal year, has the turnover of respiratory therapists for your organization**

- ◯ increased,
- ◯ decreased, or
- ◯ remained the same.

Respiratory Services

38. **How many continuous hours of respiratory care service does the organization provide each day?**

- ◯ 1 to 8 hours
- ◯ 9 to 16 hours
- ◯ 17 to 24 hours

39. **What is the number of staffed beds supported by your facility?**

Please provide a number between 1 and 2500.

40. **Does your department provide a system that helps staff therapists prioritize their work assignments when there is not enough time to complete them all?**

- ◯ Yes
- ◯ No

41. **What services does the Respiratory Therapy Department provide in your facility?**

Select all that apply.

- [ ] Actigraphy
- [ ] Arterial blood gas sampling
- [ ] Arterial blood gas analysis
- [ ] Arterial line insertion
- [ ] Arterial line maintenance
- [ ] Assisting with anesthesia in the operating room
- [ ] Assisting with bronchoscopy (with and without EBUS)
- [ ] Cardiology
- [ ] Case management/care plan development
- [ ] Distribution and management of portable oxygen
- [ ] EEG
- [ ] ECG
- [ ] Emergency intubation
- [ ] Equipment cleaning and processing
- [ ] Equipment repair and biomedical support
- [ ] Home care/DME
- [ ] Home sleep apnea testing
- [ ] Hyperbaric medicine
- [ ] Mask fit testing for respiratory protection
- [ ] Metabolic monitoring
- [ ] Neurodiagnostics
- [ ] Overnight pulse oximetry
- [ ] Participation in Medical Emergency (Rapid Response) Teams
- [ ] Patient education/disease management for asthma and COPD
- [ ] Perfusion/ECMO
- [ ] Physiologic monitoring
- [ ] Procurement and management of medical gases
- [ ] Pulmonary function testing
- [ ] Pulmonary rehabilitation
- [ ] Smoking cessation instruction
- [ ] Staffing for skilled nursing/rehab/LTAC
- [ ] Support for high-risk births
- [ ] Telemedicine/telehealth
- [ ] Transporting patients who are dependent on oxygen
- [ ] Transporting patients who are dependent on mechanical ventilation
- [ ] Ultrasound diagnostics

Required Responses

Questions on this page require a response.

* 42. **To what degree is increasing the proportion of baccaluareate-prepared respiratory therapists a goal of your department?**

Low High

* 43. **Does your department differentiate work assignments based on whether staff therapists have earned the CRT and RRT credentials?**

- Yes
- No

* 44. **Does your department exclusively staff therapists with the RRT credential?**

- Yes
- No

* 45. **Are new graduates required to attain the RRT credential within a predetermined time after the start of their employment with your organization?**

- Yes
- No

46. **Upon hire, what is the time frame in which a new graduate is required to attain the RRT?**

- ○ Within 6 months
- ○ Within 12 months
- ○ Within 18 months
- ○ Within 24 months
- ○ Other (please specify)

47. **Were individuals from your hospital trained in respiratory therapy extender roles in response to the COVID pandemic?**

- ◯ Yes
- ◯ No

48. **Did your hospital receive ventilators from the Federal Strategic National Stockpile (SNS)?**

- ◯ Yes
- ◯ No

In 2020, did a COVID pandemic-related surge in the number of patients at your hospital exceed the following:

49. **...beds?**

- ◯ Yes
- ◯ No

50. **...equipment?**

- ◯ Yes
- ◯ No
- ◯ Other (please specify)

* 51. **...staffing?**

- ◯ Yes
- ◯ No

52. **Were temporary staff used when patient levels exceeded available staff?**

- ◯ Yes
- ◯ No

COVID-19 Pandemic Employment Levels

53. **How many respiratory therapists (number of therapists - not FTEs) voluntarily vacated a job position due to the COVID pandemic?**

Full-time as defined by your institution

Part-time

* 54. **Has workforce or payroll in your department been impacted by the COVID pandemic?**

- ◯ Yes
- ◯ No

55. **In what ways has the COVID pandemic impacted your department workforce or payroll?**

Select all that apply.

- [ ] Temporary furlough
- [ ] Employment separation
- [ ] Compensation reduction
- [ ] Hazard pay
- [ ] Unbudgeted overtime

Drawing Registration

For submitting a **completed** survey, you are eligible to register for a drawing. The winner will receive one complimentary year of AARC active membership.

Your survey responses will not be associated with your personal information.

56. If you would like to register for the drawing, please provide your contact information.

Name:	
Email Address:	
Phone Number:	

Conclusion

Thank you for completing the AARC Human Resource Survey for Acute Care Hospitals!

Appendix B. Contents of the Study Solicitations and Social Media Posts

Postcard mailed to Acute Care Hospitals:

AMERICAN ASSOCIATION FOR RESPIRATORY CARE

NBRC
10801 Mastin St., Ste 300
Overland Park, KS 66210

PRSRT STD
U.S. POSTAGE
PAID
Kansas City, MO 64108
Permit No. 2687

The AARC is conducting a human resource study with help from the NBRC to examine the respiratory therapist workforce. Accurate information about respiratory therapists and the places they work is critical for identifying workforce trends. Your assistance with this project is vital.

You should be able to complete the survey within 20 minutes. Survey participants can register to win an active AARC membership for one year.

Follow the link below to take the Acute Care Hospital survey for your institution. The response deadline is ***Sunday, October 11***. If you have questions or experience difficulties, contact Jennifer Benavente (AARC.AcuteCare@nbrc.org).

www.nbrc.org/acutecare

You are also encouraged to complete a survey of individual therapists and to share the opportunity with your coworkers. Please share the link below:

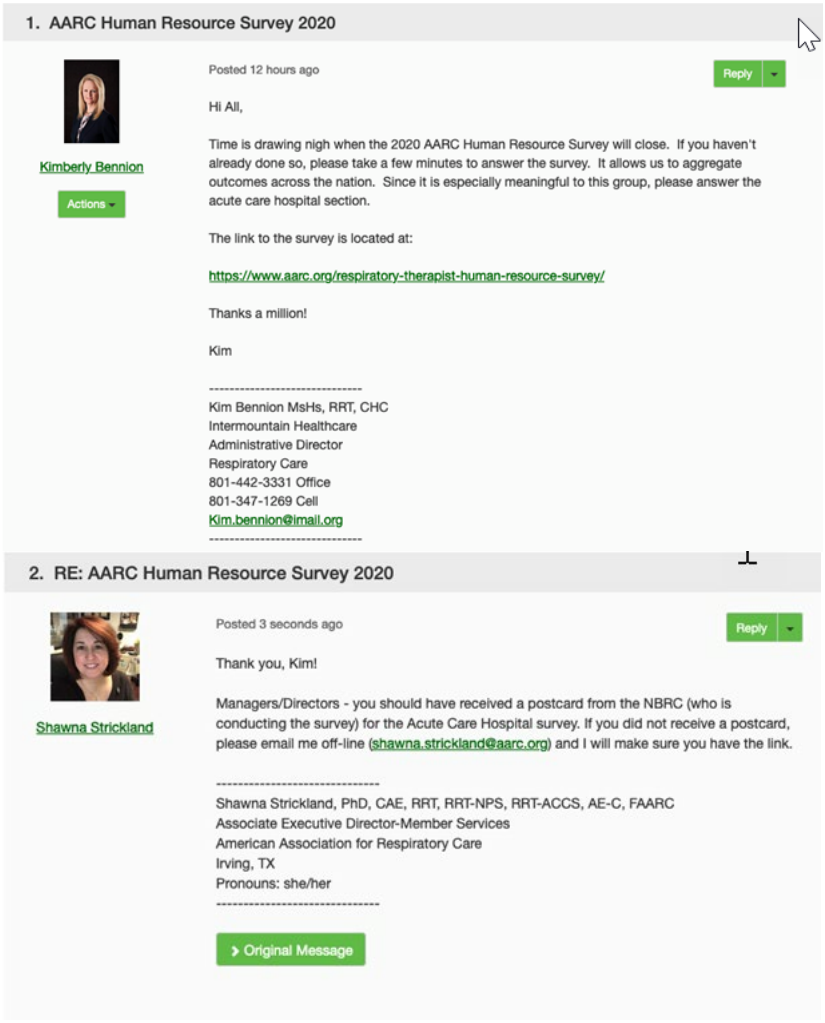
www.nbrc.org/therapist

The Therapist survey will be available until ***Sunday, September 27***. Your assistance with this project is deeply appreciated.

Karen S. Schell

Karen Schell, DHSc, RRT, RRT-NPS, RRT-SDS, RPFT, RPSGT, AE-C, CTTS

Posted on AARConnect Leadership and Management section on 9/14



1. AARC Human Resource Survey 2020

Kimberly Bennion

Actions

Posted 12 hours ago

Reply

Hi All,

Time is drawing nigh when the 2020 AARC Human Resource Survey will close. If you haven't already done so, please take a few minutes to answer the survey. It allows us to aggregate outcomes across the nation. Since it is especially meaningful to this group, please answer the acute care hospital section.

The link to the survey is located at:

https://www.aarc.org/respiratory-therapist-human-resource-survey/

Thanks a million!

Kim

Kim Bennion MsHs, RRT, CHC
Intermountain Healthcare
Administrative Director
Respiratory Care
801-442-3331 Office
801-347-1269 Cell
Kim.bennion@imail.org

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2. RE: AARC Human Resource Survey 2020

Shawna Strickland

Posted 3 seconds ago

Reply

Thank you, Kim!

Managers/Directors - you should have received a postcard from the NBRC (who is conducting the survey) for the Acute Care Hospital survey. If you did not receive a postcard, please email me off-line (shawna.strickland@aarc.org) and I will make sure you have the link.

Shawna Strickland, PhD, CAE, RRT, RRT-NPS, RRT-ACCS, AE-C, FAARC
Associate Executive Director-Member Services
American Association for Respiratory Care
Irving, TX
Pronouns: she/her

› Original Message

Reminder emailed to individuals who self-identified as managers in their AARC profile:

We Need Your Input

The AARC invites you to participate in a human resource study to examine the respiratory therapist workforce. As a manager, your support of this survey is vital to its success. So far this year, only 71 managers have responded--far below our previous survey. If you have already completed the survey, "Thank you!"

If you haven't completed the survey, please take a moment to complete it now. It should only take about 20 minutes.

TAKE THE SURVEY

The survey will be available until Sunday, October 11, 2020.

Results from this survey will be available to AARC members after collection and analysis.

Survey takers will be entered into a drawing. Prizes include AARC Congress 2020 LIVE! registrations and one-year memberships.

Your time and energy are valuable.
Thank you for all you do for the profession.

TAKE THE SURVEY

Appendix C. Frequency Tables

Table 40. Respondents and All Hospitals by State

Return to Figure 1

		Responses from the Sample				All Hospitals in the Population that were Mailed Postcards	
		Frequency	Percent	Valid Percent	Cumulative Percent	Frequency	Percent
Valid	AL	10	3.4	3.4	3.4	102	2.1
	AK	1	.3	.3	3.8	17	0.3
	AZ	4	1.4	1.4	5.2	71	1.4
	AR	1	.3	.3	5.5	82	1.7
	CA	8	2.7	2.8	8.3	372	7.5
	CO	1	.3	.3	8.6	66	1.3
	CT	1	.3	.3	9.0	39	0.8
	DE	2	.7	.7	9.7	9	0.2
	DC	1	.3	.3	10.0	12	0.2
	FL	8	2.7	2.8	12.8	218	4.4
	GA	10	3.4	3.4	16.2	161	3.3
	HI	0	0	.0	16.2	22	0.4
	ID	0	0	.0	16.2	27	0.5
	IL	6	2.1	2.1	18.3	196	4.0
	IN	13	4.5	4.5	22.8	118	2.4
	IA	14	4.8	4.8	27.6	105	2.1
	KS	28	9.6	9.7	37.2	119	2.4
	KY	7	2.4	2.4	39.7	110	2.2
	LA	6	2.1	2.1	41.7	131	2.7
	ME	2	.7	.7	42.4	35	0.7
	MD	2	.7	.7	43.1	57	1.2
	MA	4	1.4	1.4	44.5	83	1.7
	MI	6	2.1	2.1	46.6	150	3.0
	MN	11	3.8	3.8	50.3	118	2.4
	MS	4	1.4	1.4	51.7	123	2.5
	MO	6	2.1	2.1	53.8	101	2.0
	MT	1	.3	.3	54.1	50	1.0
	NE	3	1.0	1.0	55.2	69	1.4
	NV	0	0	.0	55.2	33	0.7

		Responses from the Sample				All Hospitals in the Population that were Mailed Postcards	
		Frequency	Percent	Valid Percent	Cumulative Percent	Frequency	Percent
	NH	1	.3	.3	55.5	25	0.5
	NJ	5	1.7	1.7	57.2	80	1.6
	NM	2	.7	.7	57.9	38	0.8
	NY	18	6.2	6.2	64.1	211	4.3
	NC	4	1.4	1.4	65.5	121	2.5
	ND	2	.7	.7	66.2	39	0.8
	OH	28	9.6	9.7	75.9	183	3.7
	OK	2	.7	.7	76.6	116	2.4
	OR	2	.7	.7	77.2	53	1.1
	PA	18	6.2	6.2	83.4	193	3.9
	RI	1	.3	.3	83.8	14	0.3
	SC	2	.7	.7	84.5	66	1.3
	SD	1	.3	.3	84.8	46	0.9
	TN	5	1.7	1.7	86.6	130	2.6
	TX	17	5.8	5.9	92.4	394	8.0
	UT	3	1.0	1.0	93.4	40	0.8
	VA	3	1.0	1.0	94.5	90	1.8
	VT	0	.0	.0	94.5	15	0.3
	WA	2	.7	.7	95.2	85	1.7
	WV	5	1.7	1.7	96.9	53	1.1
	WI	7	2.4	2.4	99.3	118	2.4
	WY	2	.7	.7	100.0	26	0.5
	Total	290	99.7	100.0			
Missing	System	1	.3				
Total		291	100.0				

Table 41. Distribution of respondents by region

Return to Figure 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Northeast	50	17.2	17.2	17.2
	South	89	30.6	30.7	47.9
	Midwest	125	43.0	43.1	91.0
	West	26	8.9	9.0	100.0
	Total	290	99.7	100.0	
Missing	System	1	.3		
Total		291	100.0		

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

*Table 42. Distribution of respondents by census division**

Return to Figure 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - New England	9	3.1	3.1	3.1
	2 - Middle Atlantic	41	14.1	14.1	17.2
	3 - South Atlantic	37	12.7	12.8	30.0
	4 - East North Central	60	20.6	20.7	50.7
	5 - West North Central	65	22.3	22.4	73.1
	6 - East South Central	26	8.9	9.0	82.1
	7 - West South Central	26	8.9	9.0	91.0
	8 - Mountain	13	4.5	4.5	95.5
	9 - Pacific	13	4.5	4.5	100.0
	Total	290	99.7	100.0	
Missing	System	1	.3		
Total		291	100.0		

*Divisions from US Census Bureau:
1: New England– MA, RI, NH, ME, VT, CT;
2: Middle Atlantic– NJ, NY, PA;
3: South Atlantic– DE, DC, MD, VA, WV, NC, SC, GA, FL;
4: East North Central– OH, IN, MI, WI, IL;
5: West North Central – IA, MN, SD, ND, MO, KS, NE;
6: East South Central – AL, TN, MS, KY;
7: West South Central – LA, AR, OK, TX;
8: Mountain – MT, CO, WY, ID, UT, AZ, NM, NV;
9: Pacific – CA, HI, OR, WA, AK

Table 43. Distribution of urban and rural facilities

Return to Figure 4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rural	205	70.4	70.7	70.7
	Urban*	85	29.2	29.3	100.0
	Total	290	99.7	100.0	
Missing	System	1	.3		
Total		291	100.0		

* Based on US Census Bureau estimates of cities with estimated populations greater than 50,000 in 2019, based on 2008 census.

Table 44. Use of benchmarks

Return to Figure 49

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	88	30.2	55.0	55.0
	No	72	24.7	45.0	100.0
	Total	160	55.0	100.0	
Missing	System	131	45.0		
Total		291	100.0		

Table 45. Department productivity measures

Return to Figure 51

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	121	41.6	73.3	73.3
	No	44	15.1	26.7	100.0
	Total	165	56.7	100.0	
Missing	System	126	43.3		
Total		291	100.0		

Table 46. Use of protocols

Return to Figure 52

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	125	43.0	76.2	76.2
	No	39	13.4	23.8	100.0
	Total	164	56.4	100.0	
Missing	System	127	43.6		
Total		291	100.0		

Table 47. Manager with clinical background

Return to Figure 53

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	120	41.2	73.6	73.6
	No	43	14.8	26.4	100.0
	Total	163	56.0	100.0	
Missing	System	128	44.0		
Total		291	100.0		

Table 48. Clinical background of manager

Return to Figure 54

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Clinical Laboratory Scientist	4	1.4	3.4	3.4
	EMT/Paramedic	2	.7	1.7	5.0
	Nurse	72	24.7	60.5	65.5
	Non-physician provider	1	.3	.8	66.4
	Pharmacist	3	1.0	2.5	68.9
	Physican	4	1.4	3.4	72.3
	Radiologic technologist	4	1.4	3.4	75.6
	Physical therapist	4	1.4	3.4	79.0
	Respiratory therapist	19	6.5	16.0	95.0
	Other	6	2.1	5.0	100.0
	Total	119	40.9	100.0	
Missing	System	172	59.1		
Total		291	100.0		

Table 49. Medical director designation

Return to Figure 55

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	152	52.2	94.4	94.4
	No	9	3.1	5.6	100.0
	Total	161	55.3	100.0	
Missing	System	130	44.7		
Total		291	100.0		

Table 50. Distribution of organizational models

Return to Figure 56

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Traditional centralized department	144	49.5	90.0	90.0
	Centralized department with limited support for respiratory care services	7	2.4	4.4	94.4
	Decentralized respiratory care services	9	3.1	5.6	100.0
	Total	160	55.0	100.0	
Missing	System	131	45.0		
Total		291	100.0		

Table 51. Additional responsibilities for additional certifications

Return to Figure 57

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	64	22.0	39.5	39.5
	No	98	33.7	60.5	100.0
	Total	162	55.7	100.0	
Missing	System	129	44.3		
Total		291	100.0		

Table 52. Additional compensation for additional certifications

Return to Figure 58

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	40	13.7	24.7	24.7
	No	122	41.9	75.3	100.0
	Total	162	55.7	100.0	
Missing	System	129	44.3		
Total		291	100.0		

Table 53. Scholarship offers for employment commitment

Return to Figure 59

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	41	14.1	25.5	25.5
	No	120	41.2	74.5	100.0
	Total	161	55.3	100.0	
Missing	System	130	44.7		
Total		291	100.0		

Table 54. Time needed to recruit respiratory therapists

Return to Figure 62

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	increased	102	35.1	63.0	63.0
	decreased	8	2.7	4.9	67.9
	remained the same	52	17.9	32.1	100.0
	Total	162	55.7	100.0	
Missing	System	129	44.3		
Total		291	100.0		

Table 55. Staff turnover

Return to Figure 63

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	increased	62	21.3	38.5	38.5
	decreased	12	4.1	7.5	46.0
	remained the same	87	29.9	54.0	100.0
	Total	161	55.3	100.0	
Missing	System	130	44.7		
Total		291	100.0		

Table 56. Continuous hours of respiratory care

Return to Figure 64

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 to 8 hours	13	4.5	8.1	8.1
	9 to 16 hours	23	7.9	14.3	22.4
	17 to 24 hours	125	43.0	77.6	100.0
	Total	161	55.3	100.0	
Missing	System	130	44.7		
Total		291	100.0		

Table 57. Bed size

Return to Figure 65

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	6	1	.3	.6	.6
	11	1	.3	.6	1.3
	13	1	.3	.6	1.9
	17	1	.3	.6	2.5
	18	1	.3	.6	3.2
	19	1	.3	.6	3.8
	20	3	1.0	1.9	5.7
	22	1	.3	.6	6.4
	24	3	1.0	1.9	8.3
	25	22	7.6	14.0	22.3
	27	1	.3	.6	22.9
	30	3	1.0	1.9	24.8

		Frequency	Percent	Valid Percent	Cumulative Percent
	32	1	.3	.6	25.5
	34	1	.3	.6	26.1
	35	3	1.0	1.9	28.0
	36	1	.3	.6	28.7
	50	4	1.4	2.5	31.2
	53	1	.3	.6	31.8
	56	2	.7	1.3	33.1
	58	1	.3	.6	33.8
	60	3	1.0	1.9	35.7
	65	2	.7	1.3	36.9
	70	2	.7	1.3	38.2
	72	1	.3	.6	38.9
	74	1	.3	.6	39.5
	75	3	1.0	1.9	41.4
	83	1	.3	.6	42.0
	86	1	.3	.6	42.7
	92	2	.7	1.3	43.9
	96	1	.3	.6	44.6
	99	1	.3	.6	45.2
	100	4	1.4	2.5	47.8
	109	1	.3	.6	48.4
	110	1	.3	.6	49.0
	111	1	.3	.6	49.7
	115	1	.3	.6	50.3
	125	2	.7	1.3	51.6
	132	1	.3	.6	52.2
	134	1	.3	.6	52.9
	150	5	1.7	3.2	56.1
	155	1	.3	.6	56.7
	160	1	.3	.6	57.3
	166	2	.7	1.3	58.6
	170	1	.3	.6	59.2
	172	1	.3	.6	59.9
	173	1	.3	.6	60.5
	175	1	.3	.6	61.1

		Frequency	Percent	Valid Percent	Cumulative Percent
	180	1	.3	.6	61.8
	187	1	.3	.6	62.4
	200	1	.3	.6	63.1
	211	1	.3	.6	63.7
	220	2	.7	1.3	65.0
	225	1	.3	.6	65.6
	235	1	.3	.6	66.2
	240	1	.3	.6	66.9
	250	1	.3	.6	67.5
	254	1	.3	.6	68.2
	275	2	.7	1.3	69.4
	276	1	.3	.6	70.1
	280	1	.3	.6	70.7
	300	5	1.7	3.2	73.9
	301	1	.3	.6	74.5
	320	1	.3	.6	75.2
	325	1	.3	.6	75.8
	340	2	.7	1.3	77.1
	344	1	.3	.6	77.7
	346	1	.3	.6	78.3
	350	2	.7	1.3	79.6
	400	4	1.4	2.5	82.2
	410	1	.3	.6	82.8
	417	1	.3	.6	83.4
	436	1	.3	.6	84.1
	450	2	.7	1.3	85.4
	500	5	1.7	3.2	88.5
	532	1	.3	.6	89.2
	550	1	.3	.6	89.8
	600	2	.7	1.3	91.1
	615	1	.3	.6	91.7
	620	1	.3	.6	92.4
	635	1	.3	.6	93.0
	650	2	.7	1.3	94.3
	652	1	.3	.6	94.9

		Frequency	Percent	Valid Percent	Cumulative Percent
	674	1	.3	.6	95.5
	684	1	.3	.6	96.2
	780	1	.3	.6	96.8
	860	1	.3	.6	97.5
	900	2	.7	1.3	98.7
	1000	1	.3	.6	99.4
	1500	1	.3	.6	100.0
	Total	157	54.0	100.0	
Missing	System	134	46.0		
Total		291	100.0		

Table 58. Availability of a work prioritization system

Return to Figure 66

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	116	39.9	73.0	73.0
	No	43	14.8	27.0	100.0
	Total	159	54.6	100.0	
Missing	System	132	45.4		
Total		291	100.0		

Table 59. Degree to which increasing baccalaureate-prepared therapists is a department goal

Return to Figure 67

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	37	12.7	22.8	22.8
	1	12	4.1	7.4	30.2
	2	6	2.1	3.7	34.0
	3	3	1.0	1.9	35.8
	5	3	1.0	1.9	37.7
	7	1	.3	.6	38.3
	10	7	2.4	4.3	42.6
	12	1	.3	.6	43.2
	15	1	.3	.6	43.8
	16	1	.3	.6	44.4
	18	1	.3	.6	45.1

		Frequency	Percent	Valid Percent	Cumulative Percent
	19	1	.3	.6	45.7
	20	5	1.7	3.1	48.8
	22	1	.3	.6	49.4
	25	3	1.0	1.9	51.2
	28	1	.3	.6	51.9
	30	1	.3	.6	52.5
	33	1	.3	.6	53.1
	35	2	.7	1.2	54.3
	36	1	.3	.6	54.9
	37	1	.3	.6	55.6
	39	1	.3	.6	56.2
	40	1	.3	.6	56.8
	41	2	.7	1.2	58.0
	42	1	.3	.6	58.6
	45	1	.3	.6	59.3
	49	1	.3	.6	59.9
	50	16	5.5	9.9	69.8
	51	1	.3	.6	70.4
	52	1	.3	.6	71.0
	53	2	.7	1.2	72.2
	54	1	.3	.6	72.8
	55	2	.7	1.2	74.1
	56	1	.3	.6	74.7
	58	1	.3	.6	75.3
	60	3	1.0	1.9	77.2
	61	1	.3	.6	77.8
	70	2	.7	1.2	79.0
	75	11	3.8	6.8	85.8
	78	1	.3	.6	86.4
	80	3	1.0	1.9	88.3
	84	1	.3	.6	88.9
	85	4	1.4	2.5	91.4
	87	1	.3	.6	92.0
	90	1	.3	.6	92.6
	99	1	.3	.6	93.2

		Frequency	Percent	Valid Percent	Cumulative Percent
	100	11	3.8	6.8	100.0
	Total	162	55.7	100.0	
Missing	System	129	44.3		
Total		291	100.0		

Table 60. Differentiation of work assignments based on credential

Return to Figure 68

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	33	11.3	20.4	20.4
	No	129	44.3	79.6	100.0
	Total	162	55.7	100.0	
Missing	System	129	44.3		
Total		291	100.0		

Table 61. RRT Requirement for employment

Return to Figure 69

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	63	21.6	38.9	38.9
	No	99	34.0	61.1	100.0
	Total	162	55.7	100.0	
Missing	System	129	44.3		
Total		291	100.0		

Table 62. RRT attainment requirement

Return to Figure 70

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	95	32.6	58.6	58.6
	No	67	23.0	41.4	100.0
	Total	162	55.7	100.0	
Missing	System	129	44.3		
Total		291	100.0		

Table 63. Time frame to earn RRT credential upon hire

Return to Figure 71

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within 6 months	30	10.3	31.9	31.9
	Within 12 months	36	12.4	38.3	70.2
	Within 18 months	4	1.4	4.3	74.5
	Within 24 months	4	1.4	4.3	78.7
	Other	20	6.9	21.3	100.0
	Total	94	32.3	100.0	
Missing	System	197	67.7		
Total		291	100.0		

Table 64. Training in extender roles in response to COVID pandemic

Return to Figure 72

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	72	24.7	45.3	45.3
	No	87	29.9	54.7	100.0
	Total	159	54.6	100.0	
Missing	System	132	45.4		
Total		291	100.0		

Table 65. Receipt of ventilators from the Strategic National Stockpile (SNS)

Return to Figure 73

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	38	13.1	23.9	23.9
	No	121	41.6	76.1	100.0
	Total	159	54.6	100.0	
Missing	System	132	45.4		
Total		291	100.0		

Table 66. Patient load exceeded bed capacity due to COVID pandemic

Return to Figure 74

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	28	9.6	17.4	17.4
	No	133	45.7	82.6	100.0
	Total	161	55.3	100.0	
Missing	System	130	44.7		
Total		291	100.0		

Table 67. Patient levels exceeded equipment capacity due to COVID pandemic

Return to Figure 75

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	43	14.8	26.9	26.9
	No	117	40.2	73.1	100.0
	Total	160	55.0	100.0	
Missing	System	131	45.0		
Total		291	100.0		

Table 68. Patient levels exceeded staff capacity due to COVID pandemic

Return to Figure 76

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	50	17.2	30.9	30.9
	No	112	38.5	69.1	100.0
	Total	162	55.7	100.0	
Missing	System	129	44.3		
Total		291	100.0		

Table 69. Temporary staff used when patient levels exceeded staff capacity due to COVID pandemic

Return to Figure 77

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	26	8.9	53.1	53.1
	No	23	7.9	46.9	100.0
	Total	49	16.8	100.0	
Missing	System	242	83.2		
Total		291	100.0		

Table 70. Full-time therapists who voluntarily vacated a position due to COVID

Return to Figure 78

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	102	35.1	70.3	70.3
	1	23	7.9	15.9	86.2
	2	11	3.8	7.6	93.8
	3	4	1.4	2.8	96.6
	4	1	.3	.7	97.2
	5	2	.7	1.4	98.6
	6	1	.3	.7	99.3
	10	1	.3	.7	100.0
	Total	145	49.8	100.0	
Missing	System	146	50.2		
Total		291	100.0		

Table 71. Part-time therapists who voluntarily vacated a position due to COVID

Return to Figure 79

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	99	34.0	78.6	78.6
	1	18	6.2	14.3	92.9
	2	4	1.4	3.2	96.0
	3	4	1.4	3.2	99.2
	6	1	.3	.8	100.0
	Total	126	43.3	100.0	
Missing	System	165	56.7		
Total		291	100.0		

Table 72. Workforce/payroll impact by COVID pandemic

Return to Figure 80

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	100	34.4	61.7	61.7
	No	62	21.3	38.3	100.0
	Total	162	55.7	100.0	
Missing	System	129	44.3		
Total		291	100.0		

Appendix D. Other Responses

Indicate the departments for which the respiratory manager is responsible.

- 3 Campus Locations
- Administration
- anesthesia
- Audiology Services, Dietitian Services
- black lung clinic
- ECLS
- Emergency Preparedness
- Emergency Preparedness/Management, & Safety
- extended care facilities
- Free standing ED RT, PFT HOD in another county
- Hemodynamic Monitoring, Special Procedures- in pt bronchs, R/Q
- HME
- Industrial Medicine (DOT drug screens)
- infant monitoring
- Interim mgr 2 Infusion clinics and 1 Wound clinic (2 caresites) . All depts over 3 caresites
- Laboratory
- Laboratory, Medical Imaging
- LTC vent unit and in house RT
- nursing
- Occupational Health
- phlebotomy/lab
- Photo Therapy, Special Procedure Lab
- Point of Care Testing, Pulmonary Lab, ECMO
- Process Improvement/Quality
- Pulmonary adminstration
- Radiology
- Rehab
- Respiratory Neonatal
- Respiratory NICU and Women Services
- Speech
- Therapies (PT/OT/ST), Infusion, Oxygen Therapy, Cardiovascular Diagnostics (ECHO, Ultrasound)
- transport, and communication center

Which of the following is used to measure productivity in your institution?

- #AARC weighted procedures
- AARC Workload units
- APC's
- Billable Procedures Only
- Blood Gas Records
- Hours per unit of service
- Hybrid system - AARC Time-standards + Optix
- Mbat.avelead.com

Assuming you are the director/manager of respiratory care services, what is the clinical background of the administrative officer to whom you report?

- ACEO
- clinical resource
- CNO
- CV Tech
- MD
- Occupational Therapist

Does your organization offer any of the following recruitment or retention incentives for respiratory care staff?

- Additional pay for learning to perform sleep testing.
- Advanced credential differential (ex extra $1 for ACCS)
- Annual bonus for credential ACCS, NPS, etc
- Covers RT License and AARC membership
- Crisis pay of $5/hour
- Educational seminars for CEUs
- Employee referral bonus
- Goal-based Employee Bonus
- Professional Development stipend

Upon hire, what is the time frame in which a new graduate is required to attain the RRT?

- 1 year as required by licensure
- 90 days
- Before hire, No CRTs are hired
- Currently hiring only RRTs, current CRTs have no limit
- Have to have it to be employed here (now also a licensure requirement in New Mexico for new applicants
- must already have RRT
- Must have before we will hire even with new grads
- Must have prior to hire
- no new grads hired, one year experience required
- not hired until RRT obtained
- Only hire RRT
- only RRT are considered
- pre-employment
- prior to employment
- prior to employment
- prior to hire
- Prior to starting
- Upon employment
- Upon hire
- We will not hire them without the RRT credential