2021 Workforce Survey Report

August 2021

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Workforce survey made possible through a grant from:

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Project Objectives

The AAST Board of Directors sought to better understand current and anticipated market conditions in the field of sleep technology and better prepare those in the profession to address or adjust to those trends.

There is preliminary evidence of an increasing shift to home or hospital-based sleep studies and telehealth, accelerated by the COVID-19 pandemic, with the work traditional performed by sleep technologists being transitioned to other healthcare professionals.

There is a need to assess, through quantitative research, if this is a widespread challenge and long-term change, and if opportunities exist to provide education to help position sleep technologists to assume similar roles in different settings or leverage other opportunities to use their skills and training.

An online survey was developed in collaboration with AAST subject-matter experts, to better understand these areas:

- Where is sleep testing going, and where will it be done?
- Where will the therapy referral come from? Who will be doing it?
- Who will manage therapy?
- Who will do screening and education on the front/back ends of testing?
- What's trending in diagnostics?
- Where are research dollars going? Where does AI technology fit in?
- What of this can be done at the sleep technologist level and what education is needed to support trends/future shifts?

AAST sought feedback on the areas outlined above from a broad spectrum of professionals who influence and provide sleep therapy, including physicians, dentists, nurses, sleep managers, technicians and durable medical equipment (DME) providers. AAST conducted outreach to organizations representing these individuals to request distribution of the survey to those organizations' stakeholders.

The ultimate goal of this pan-industry survey is the creation of a report that showcases the perspectives of those different stakeholder groups about the future of sleep technology. AAST will host a summit with partnering organizations to explore findings, determine key trends and identify next steps. It is anticipated that this summit will take place in the spring of 2022.

Survey Methodology

Survey Name AAST Workforce Survey

Survey Time Period April – May 2021

Length 66 total questions, with distinct lines of questions based on responses regarding work environment, supervisory capacity and current position. The average time for survey completion was 10 minutes, 50 seconds.

Methodology The online survey was designed by a task force of AAST volunteers and SmithBucklin Marketing & Communication Services (MCS).

AAST stakeholders (members, lapsed members, followers, etc.) were invited to complete the survey via a series of dedicated emails and promotions via AAST social media platforms.

The following organizations also distributed the survey link to stakeholders through enewsletters, dedicated emails, website promotion or similar outreach:

- Accreditation Commission for Health Care (ACHC)
- American Academy of Sleep Medicine (AASM)
- American Association for Respiratory Care (AARC)
- Board of Registered Polysomnographic Technologists (BRPT)
- Philips
- Society of Behavioral Sleep Medicine
- VGM & Associates

The information within this report is based on 1,303 responses. Given the broad distribution, it is not possible to accurately determine the number of people invited to complete the survey and margin of error.

Reading the Report Results for each survey question are presented in the report in table format. The following statistics are shown in this report:

- The mean is derived by totaling the values for a given response category then dividing by the total number of responses.
- The median is the midpoint at which all responses are evenly divided above or below.
- Percentages are derived by dividing the number of responses per category by the total number of responses to the survey. It is important to note, multiple responses were allowed for some survey questions, and percentages were rounded to the nearest percent. Therefore, some percentages will not equal 100 percent.
- The base indicates the total number of responses analyzed for a given survey question.
- Where no responses were received, a dash (“-”) appears in the table, indicating that no respondents selected that particular option or value.
- If less than three respondents answered a survey question, an asterisk (“*”) appears in the table, indicating insufficient data.

Executive Summary

Where is sleep testing going, and where will it be done?

- While there is stability or growth for the majority of respondents, nearly one-fifth of respondents reported decreasing in-lab sleep studies. Most were moving to the home. 46% of respondents indicated the volume of sleep studies was increasing prior to the COVID-19 pandemic, with an average increase of 23%. For the 17% indicating a decrease, the average decrease was 40%. Tests formerly performed at the facility were moving to home for 85% of respondents. 15% of respondents don't anticipate the volume of in-lab studies to return to pre-pandemic levels.
- Decline in testing volume and/or financial outlook were significant drivers of negative sentiment surrounding the outlook for sleep centers. Fewer technicians and technologists believed their sleep centers had a strong outlook those more senior to them.
    - 38% of respondents cited an uncertain or at risk/unstable outcome for their sleep center. For those indicating an uncertain or at risk/unstable outlook, decline in testing volume was cited as a reason by two-thirds of respondents.

Where will the therapy referral come from? Who will be doing it?

- Close to half of clinical coordinators and sleep center managers/directors assist with the referral process, directly providing referrals primarily remains with physicians and nurse practitioners.
    - The majority of respondents (60%) have no role in referring patients for additional treatment. All nurse practitioners and physicians directly provided referrals. More clinical coordinators and sleep center managers/directors indicated a role than technicians and technologists.

Who will manage therapy? AND *Who will do screening and education on the front/back ends of testing?*

- The role of physicians in patient screening and education has decreased in the past three to five years, and most others in the sleep center believe role will remain the same or increase. While the role of the sleep technologist has increased for some respondents, it has increased more for other positions.
    - Between 33%-35% of respondents reported an increase in their role in patient screening and education (pre-test and provision of treatment) in the past 3-5 years.
    - Between 40%-44% of respondents reported that physicians were performing these tasks previously.
    - More clinical coordinators (54%) and respiratory therapists (45%) have increased their roles in patient screening the last 3-5 years than polysomnographic technologists (29%) and polysomnographic technicians (27%).
    - More clinical coordinators (54%) and respiratory therapists (55%) have increased their roles in patient education (pre-test) the last 3-5 years than polysomnographic technologists (31%) and polysomnographic technicians (22%).
    - More clinical coordinators (59%) and respiratory therapists (55%) have increased their roles in patient education (provision of treatment) the last 3-5 years than polysomnographic technologists (29%) and polysomnographic technicians (29%).

What's trending in diagnostics?

- The outsourced use of technology is not common/commonly known about by respondents. In-house, technology is being used by the majority of respondents for patient monitoring and compliance, and sleep scoring. It is in these same areas that small portions of respondents noted plans to implement technology in the next 3-5 years.
    - 66% of respondents were not outsourcing the use of technology and 27% didn't know/were unsure if technology use was being outsourced. Similarly, 61% of respondents didn't know/were unsure about future plans to implement technology at their sleep centers or indicated they weren't using technology.
    - More than half of respondents were currently using technology in their sleep center for patient monitoring (59%), patient compliance (52%) and sleep scoring (51%). Of those who were knowledgeable about future technology plans at their sleep centers, between 16%-20% said technology would be implemented for patient compliance, patient monitoring and sleep scoring.

Where are research dollars going? AND Where does AI technology fit in?

- The top-three areas in which respondents saw the greatest growth opportunities in sleep technology were: Home sleep technology (67%), virtual care/telehealth (53%) and consumer wearables/data collection (41%).
- Home sleep testing/portable sleep testing (47%) consumer wearables/data collection (40%), automated scoring technologies (37%) and AI/machine learning scoring technologies (36%) were the top-cited challenges and trends anticipated in the next 3-5 years.
- Equal numbers (30%) of respondents believe that artificial intelligence will be used in scoring technologies and for identifying the probability of a sleep disorder.
- 65% of respondents believe remote CPAP is the future of healthcare delivery.

What of this can be done at the sleep technologist level and what education is needed to support trends/future shifts?

- While there is generally confidence in and a desire to increase the role of the sleep technologist in patient screening and education, their lack of adaptability, knowledge of complex cases and critical thinking skills are seen as significant areas of opportunity.
    - Between 52%-57% of non-technologist respondents anticipate the role of the sleep technologist in patient screening and education will increase in the next 3-5 years. However, 10% of that same group has shifted work from sleep technologists to other professionals due to concerns with training/education or staffing shortages.
    - More than half of all respondents believe sleep technologists have the greatest ability to expand their role in the areas of patient education (67%), adaptability (55%), diagnostic testing (54%) and follow up (53%). It is in many of these same areas that all respondents also believe sleep technologists have the greatest educational needs: Adaptability (48%), patient education (44%) and follow up (41%).
    - The majority of all respondents think the critical competencies/skills a sleep technologist will most need to be successful in the next 3-5 years are: adaptability to changes in the field (74%), knowledge of complex patients/cases (63%), critical thinking/problem solving (57%) and technical skills/knowledge (56%).
    - Roughly one-fourth of sleep technologists indicated they will leave the profession within the next five years. For the majority of those respondents, the reason cited is retirement.

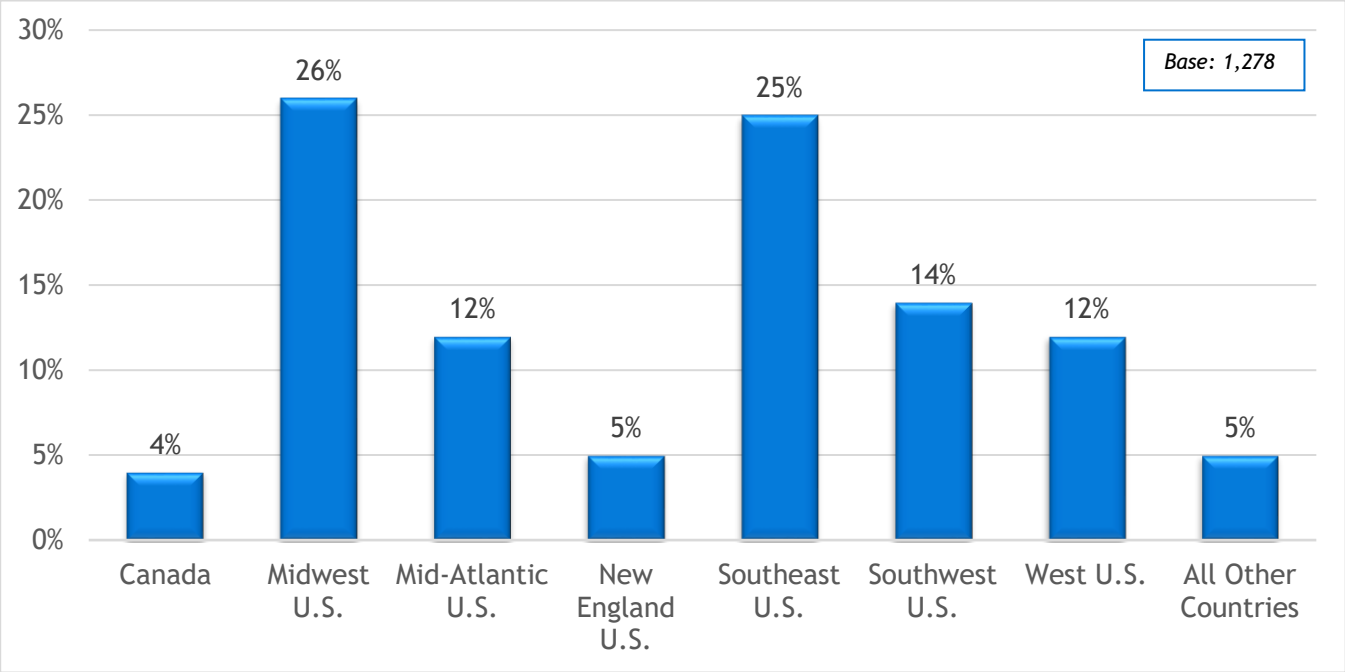
Opportunities revealed in trends data:

- With the shift to more home-sleep testing and more direct referrals to sleep labs, there also needs to be a shift in how patients are managed.
    - There is opportunity for sleep technologists to be the individual who follows the patient through the entire continuum of care.
    - With the proper education/training, sleep technologists could play a greater role in referrals (sleep history/chart notes), patient education (pre-test – need for study), follow up, outcomes management and risk management.
- Home-sleep testing does not address other sleep disorders. Educated sleep technologists are still needed to support other in-lab sleep testing.
- There needs to be a more well-defined career path for sleep technologists. Many sleep technologists are not aware of new opportunities and are not prepared to assume those roles.
    - Additional education, soft skills and critical thinking skills, as well as adaptability, are areas of opportunity to help prepare for these new career paths.

Survey Results

Q1. In which state, province or territory are you located? **(ALL RESPONDENTS)**

Ninety-one percent of respondents are located within the United States and its territories, 4% are in Canada, and 5% are located in other countries.



Midwest U.S.:
IL, IN, IA, KS, MI, MN, NE, OH & WI

Mid-Atlantic U.S.:
DC, DE, MD, NJ, NY & PA

New England U.S.:
CT, MA, ME, NH, RI & VT

Southeast U.S.:
AL, FL, GA, KY, MS, NC, SC, TN, VA & WV

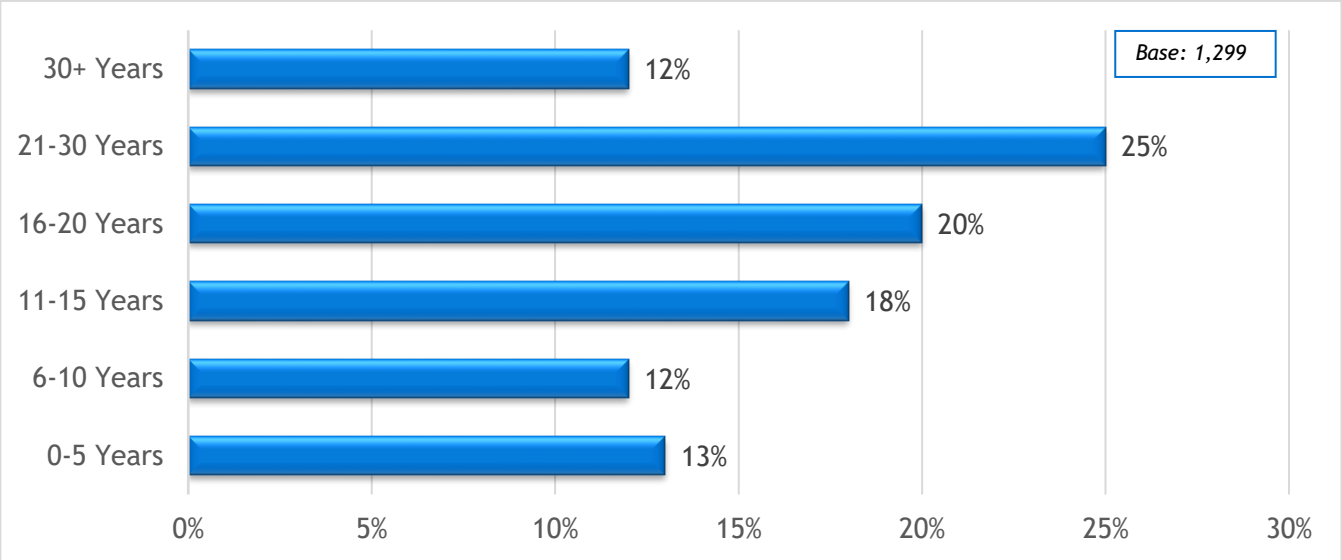
Southwest U.S.:
AZ, AR, LA, MO, NM, NV, OK & TX

West U.S.:
AK, CA, CO, HI, ID, MT, ND, OR, SD, UT, WA & WY

Survey Results

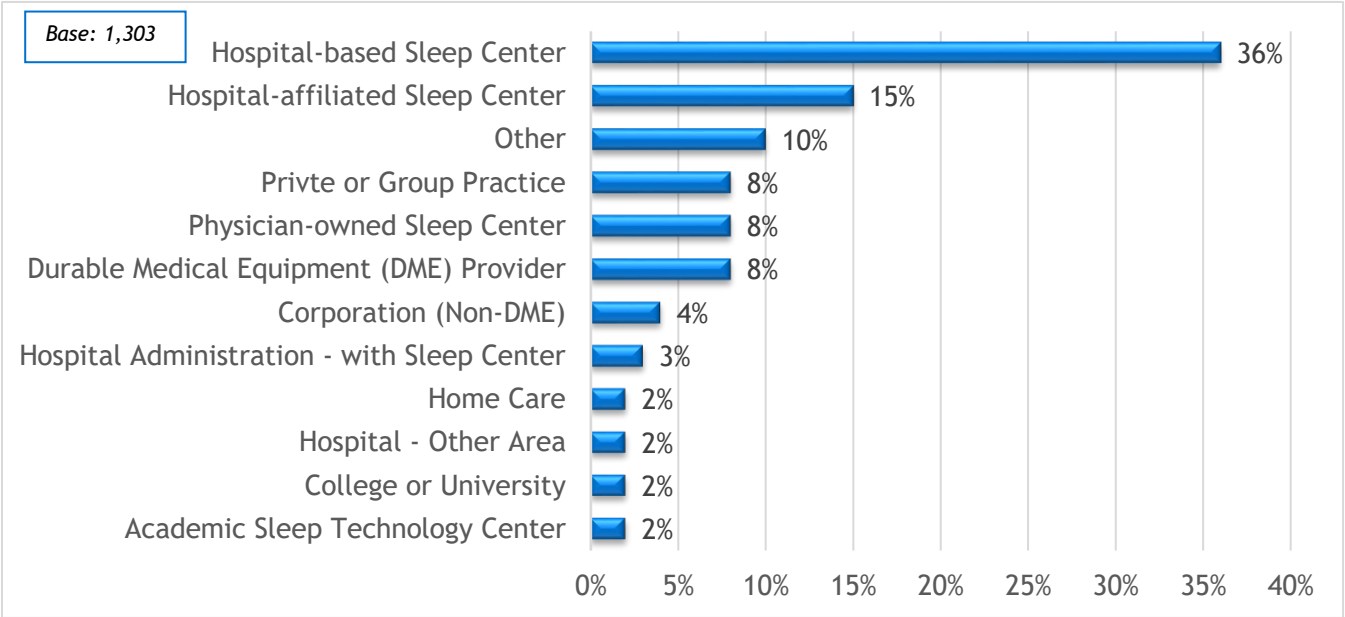
Q2. How many years of experience in sleep technology do you have? **(ALL RESPONDENTS)**

Significantly more sleep managers/directors and clinical coordinators (56%) have at least 21 years of experience compared to 32% of polysomnographic technologists, and 21% of respiratory therapists and polysomnographic technicians.



Q3. Which of the following best describes your current work environment? **(ALL RESPONDENTS)**

65% of polysomnographic technologists and 56% of polysomnographic technicians work in hospital-based or hospital affiliated sleep centers, while 59% of respiratory therapists work for DMEs.

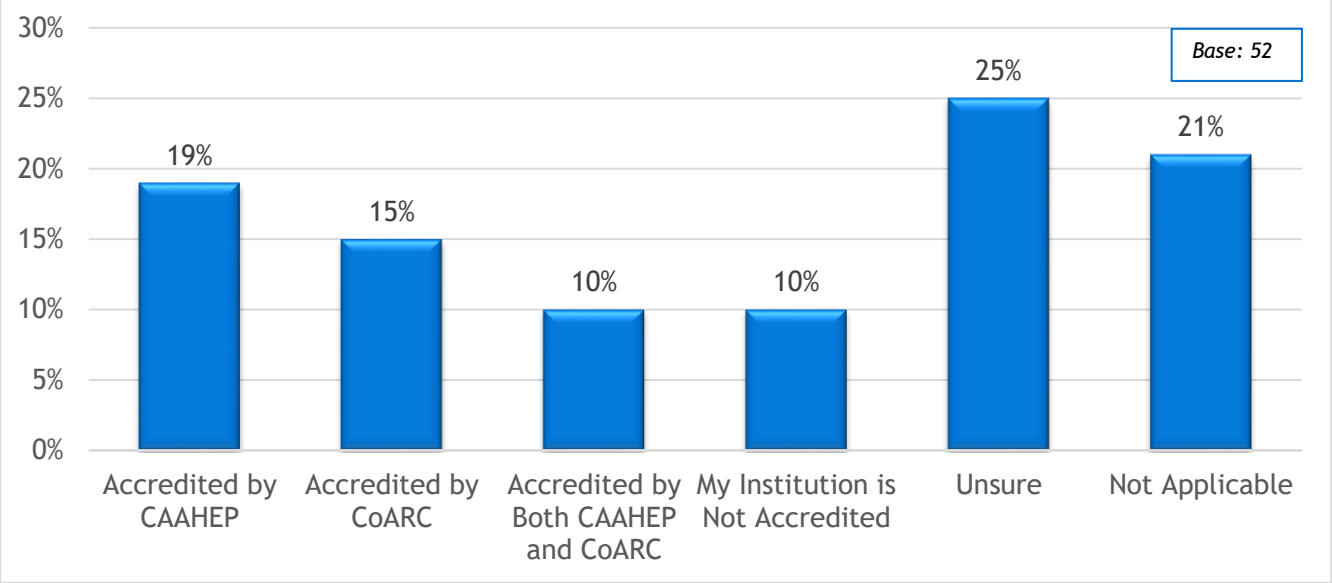


Other - 132 open-end responses. Most common included: Retired, unemployed, independent contractor, Veterans Administration or multiple settings

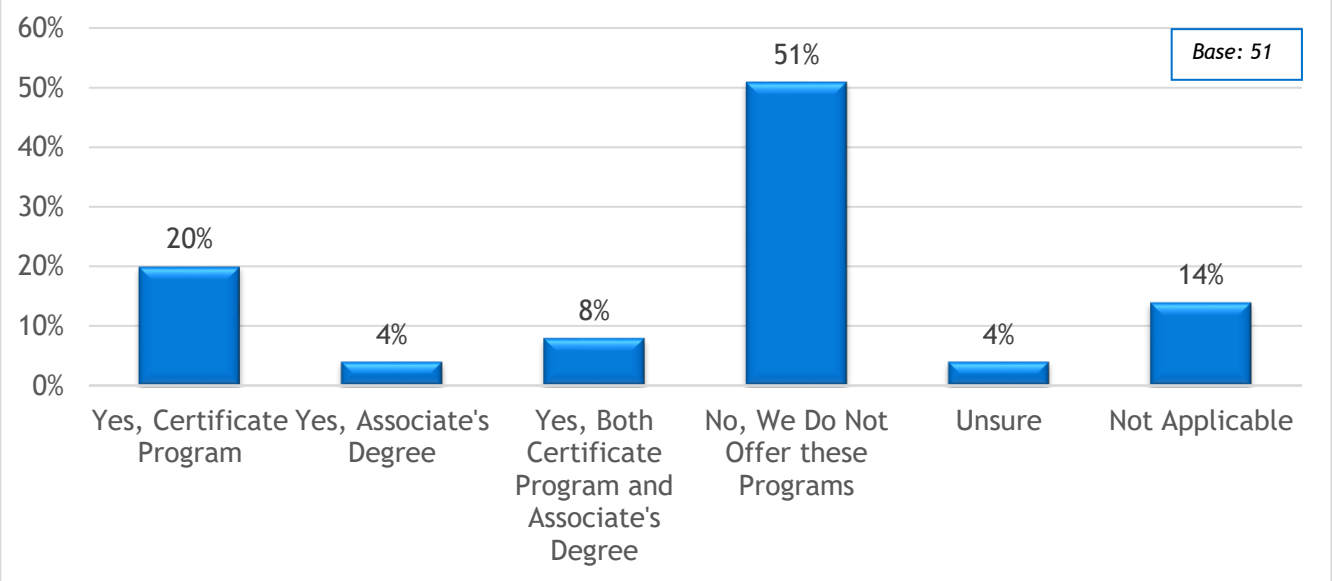
Note: Insufficient data received for those in Hospital Administration – without Sleep Center.

Survey Results

Q4. What is the accreditation status of your institution? **(RESPONDENTS AT ACADEMIC INSTITUTIONS)**



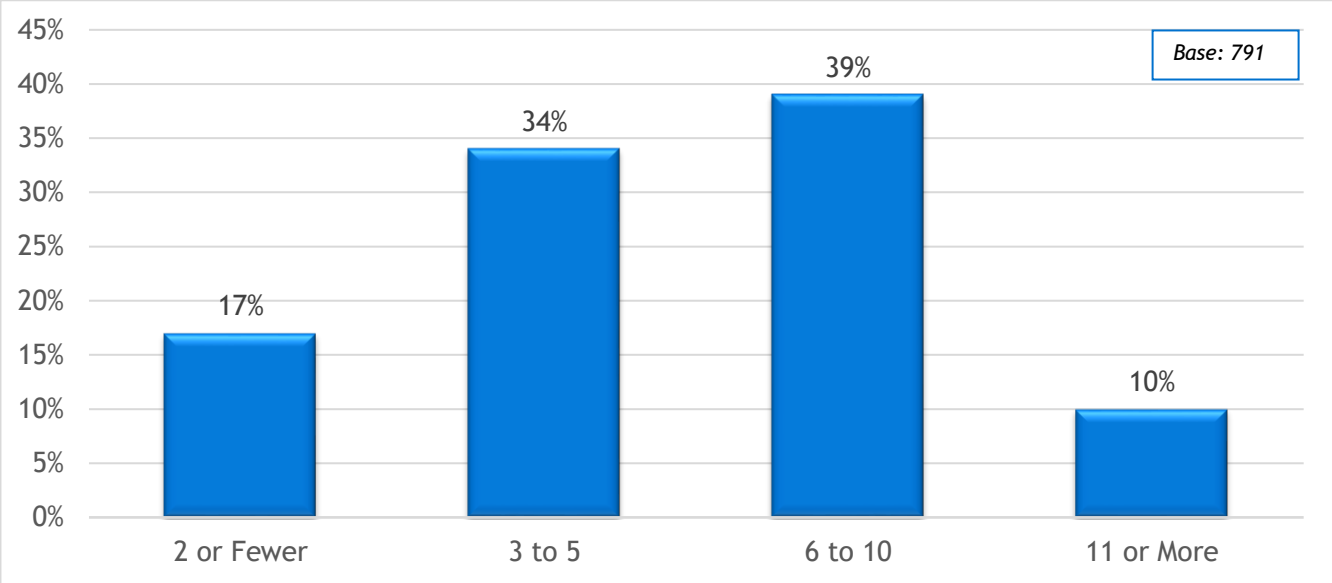
Q5. Does your institution currently offer programs related to polysomnographic technology? **(RESPONDENTS AT ACADEMIC INSTITUTIONS)**



Survey Results

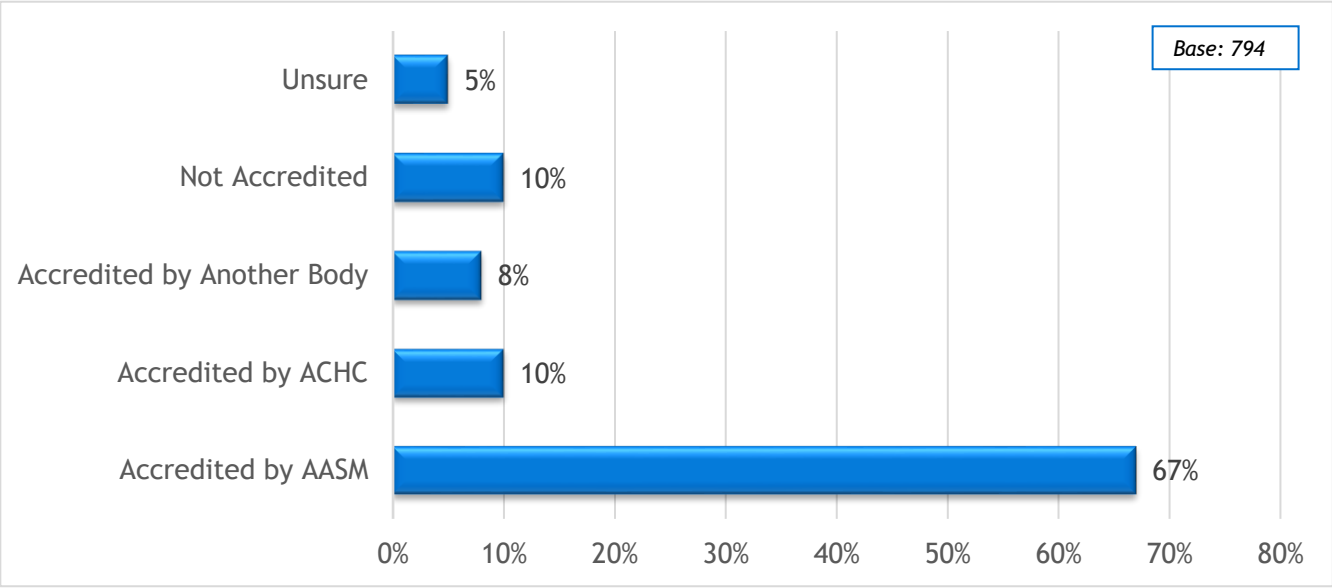
Q6. What is the number of beds in your facility? **(RESPONDENTS AT SLEEP CENTERS)**

Respondents at sleep centers were split between those at facilities with up to 5 beds (51%) and those with 6 or more beds (49%). Clinical coordinators tended to work in larger facilities.



Q7. What is the accreditation status of your facility? **(RESPONDENTS AT SLEEP CENTERS)**

Two-thirds of respondents at sleep centers work at facilities accredited by AASM. Fewer technicians and technologists worked in ACHC-accredited facilities than clinical coordinators and sleep managers/directors.

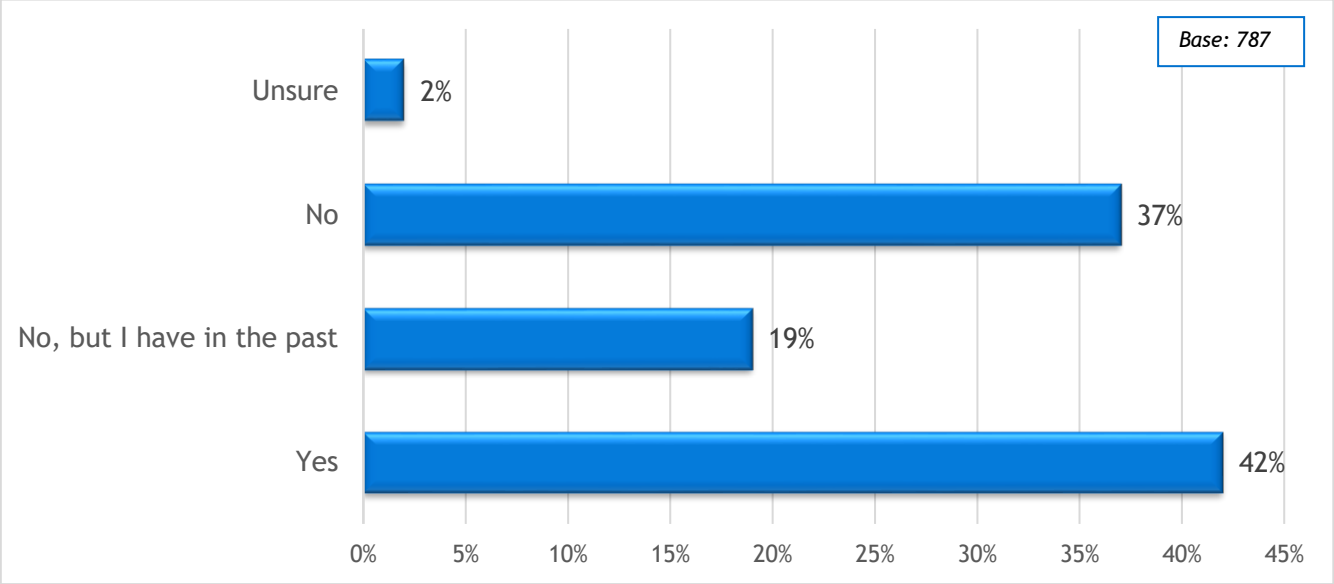


Survey Results

Q8. Please indicate the accrediting body: **(RESPONDENTS AT SLEEP CENTERS, THOSE INDICATING "ANOTHER BODY" IN Q7)** -- 58 open-end responses included: The Joint Commission (U.S. and International), Ontario Ministry of Health, NATA/Australasian Sleep Association, College of Physicians and Surgeons of Ontario and other regulatory organizations outside of the U.S.

Q9. In your current position, do you directly or indirectly supervise sleep technology practitioners? **(RESPONDENTS AT SLEEP CENTERS)**

The majority of respondents (61%) currently or have previously supervised sleep technology practitioners. Nearly all sleep managers/directors and clinical coordinators were currently or had in the past served as supervisors, whereas less than half of technicians and technologists inidicated the same.



Q10. Please indicate the number of sleep technology practitioners who have achieved the following as the highest level of education: **(RESPONDENTS AT SLEEP CENTERS WHO CURRENTLY SUPERVISE OR PREVIOUSLY SUPERVISED SLEEP TECHNOLOGY PROFESSIONALS)**

Education Level	Mean Number of Practitioners	Median Number of Practitioners	*Base*
Some High School	5	2	*43*
High School Diploma	**6**	**4**	***150***
Some College or Technical Training	4	3	*190*
Technical or Junior College Degree	3	2	*132*
Associate's Degree	3	2	*227*
Bachelor's Degree (Four-Year College Degree)	3	2	*245*
Master's Degree	1	1	*97*
Professional Degree (MD, JD, M.Ed., etc.)	3	1	*81*
Doctoral Degree (PhD)	1	0	*45*

Survey Results

Q11. Please indicate the number of sleep technology practitioners who hold the following credentials or certifications: **(RESPONDENTS AT SLEEP CENTERS WHO CURRENTLY SUPERVISE OR PREVIOUSLY SUPERVISED SLEEP TECHNOLOGY PROFESSIONALS)**

Credential/ Certification	Mean Number of Practitioners	Median Number of Practitioners	*Base*
RPSGT	**6**	**4**	***371***
RST	3	2	*161*
RPSGT/RRT	3	2	*192*
RRT	2	2	*113*
Other (Please specify)	2	1	*32*
CCSH	2	1	*109*
CSE*	1	1	*55*
RPSGT/R. EEG T.	1	1	*71*
NP/PA	1	1	*39*
RN	1	1	*42*
Not Applicable	n/a	n/a	*19*
EMT	1	1	*39*
R. EEG T.	1	0	*29*
CNA	-	-	*21*

- = No data submitted.

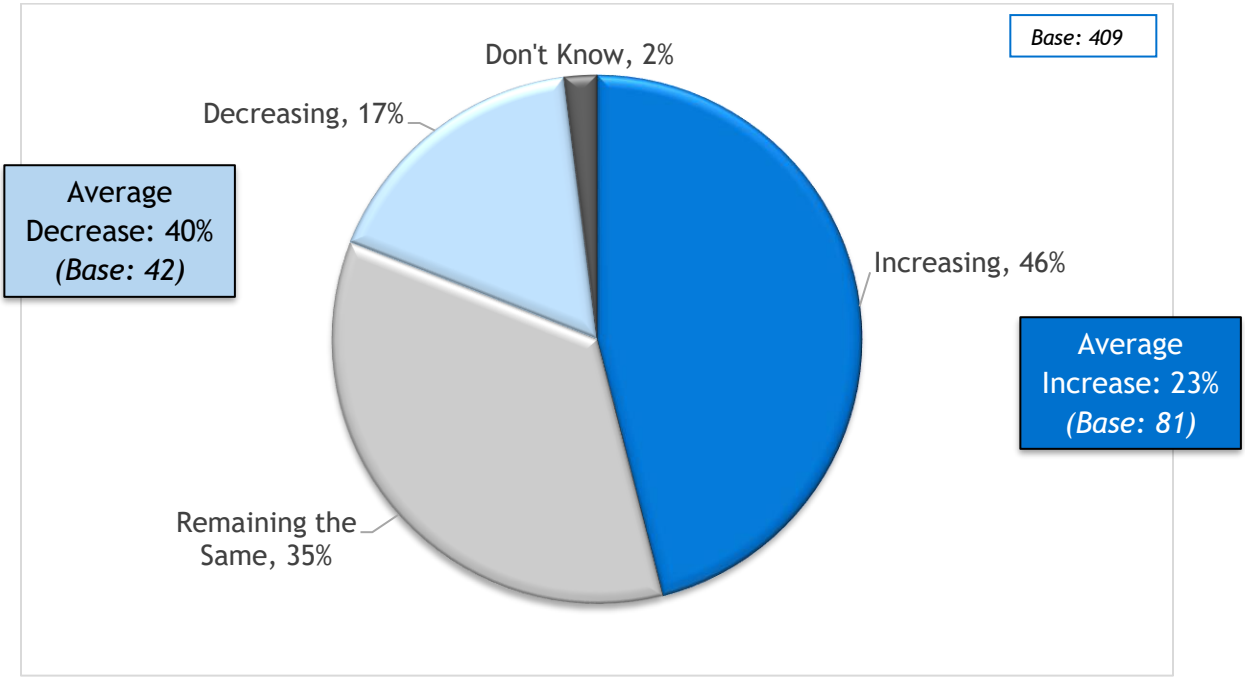
**While CSE is a certificate program, it was included as an option due to the possible prevalence with sleep technology professionals.*

Q12. Please indicate the percentage of sleep studies being performed in each of the settings listed below: **(RESPONDENTS AT SLEEP CENTERS WHO CURRENTLY SUPERVISE OR PREVIOUSLY SUPERVISED SLEEP TECHNOLOGY PROFESSIONALS)**

Setting	Mean Perentage of Sleep Studies	Median Percentage of Sleep Studies	*Base*
In-lab Studies	**64%**	**61%**	***363***
Home Sleep Apnea Studies	39%	40%	*332*
Not Applicable	n/a	n/a	*15*
Don't Know	n/a	n/a	*21*

Survey Results

Q13 - Q15. Prior to the COVID-19 pandemic, was your volume of in-lab sleep studies…:
(RESPONDENTS AT SLEEP CENTERS WHO CURRENTLY SUPERVISE OR PREVIOUSLY SUPERVISED SLEEP TECHNOLOGY PROFESSIONALS)



Q16. For studies formerly being performed at your facility, please indicate where these sleep studies have moved. (Please select all that apply.) **(RESPONDENTS AT SLEEP CENTERS WHO CURRENTLY SUPERVISE OR PREVIOUSLY SUPERVISED SLEEP TECHNOLOGY PROFESSIONALS)**

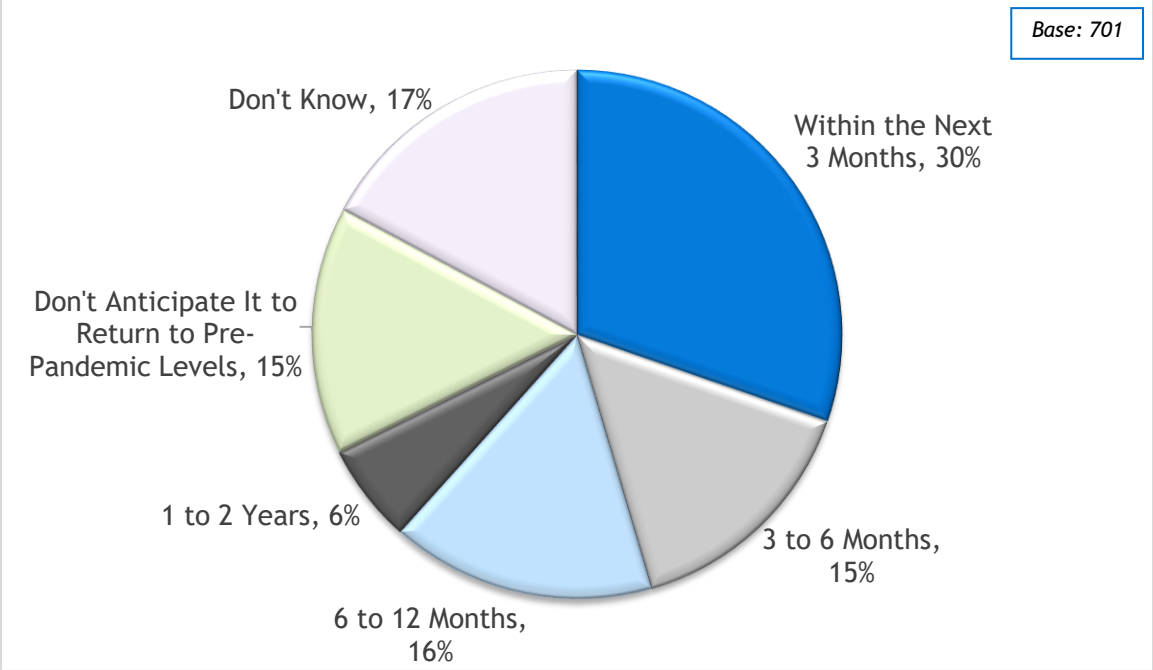
Setting	Proportion of Respondents
At Home	**85%**
To Another Sleep Center	9%
In a Hospital	3%
Don't Know	16%

Base: 64

Survey Results

Q17. Once post-COVID-19 conditions have been reached (where the majority of the population has achieved immunity), how soon do you anticipate the volume of in-lab studies to return to pre-pandemic levels? **(RESPONDENTS AT SLEEP CENTERS WHO CURRENTLY SUPERVISE OR PREVIOUSLY SUPERVISED SLEEP TECHNOLOGY PROFESSIONALS)**

75% of clinical coordinators and 69% of sleep managers/directors cited within 12 months, as compared to 58% of technicians and technologists.



Note: Insufficient data or no data provided for 3 to 4 years and 5 years response options.

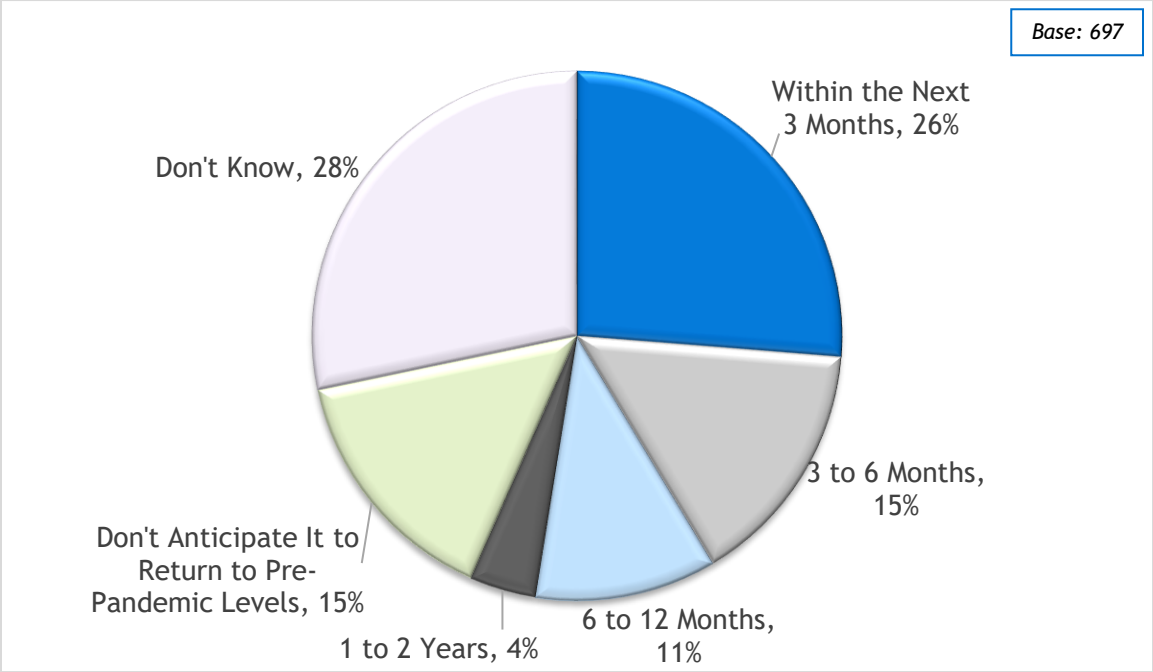
Q18. What percentage of visits are CURRENTLY being performed via telehealth? If you don't have this information, please skip the question. **(RESPONDENTS AT SLEEP CENTERS WHO CURRENTLY SUPERVISE OR PREVIOUSLY SUPERVISED SLEEP TECHNOLOGY PROFESSIONALS)**

Mean Percentage	Median Percentage	Base
40%	31%	281

Survey Results

Q19. Once post-COVID-19 conditions have been reached (where the majority of the population has achieved immunity), how soon do you anticipate the volume of IN-PERSON APPOINTMENTS/VISITS to return to pre-pandemic levels? **(RESPONDENTS AT SLEEP CENTERS WHO CURRENTLY SUPERVISE OR PREVIOUSLY SUPERVISED SLEEP TECHNOLOGY PROFESSIONALS)**

One third of technicians and technologists didn't know when in-person appointments/visits would return to pre-pandemic levels, significantly more than clinical coordinators and sleep managers/directors.



Note: Insufficient data or no data provided for 3 to 4 years and 5 years response options.

Q20. What percentage of visits do you anticipate will be conducted via telemedicine once post-COVID conditions have been reached? If you don't know, please skip this question. **(RESPONDENTS AT SLEEP CENTERS WHO CURRENTLY SUPERVISE OR PREVIOUSLY SUPERVISED SLEEP TECHNOLOGY PROFESSIONALS)**

Mean Percentage	Median Percentage	Base
54%	50%	55

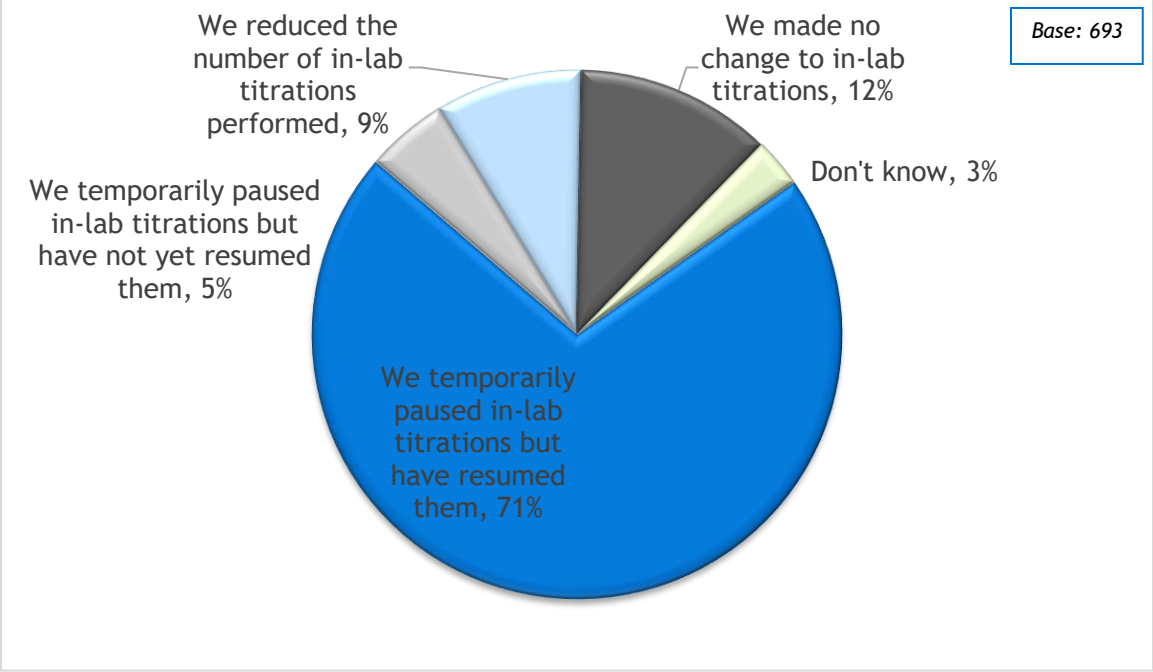
Survey Results

Q21. As compared to your current levels, is the percentage above (of post-COVID telemedicine visits)..: **(RESPONDENTS AT SLEEP CENTERS WHO CURRENTLY SUPERVISE OR PREVIOUSLY SUPERVISED SLEEP TECHNOLOGY PROFESSIONALS)**

Change Compared to Current Levels	Proportion of Respondents
An increase	29%
Consistent with current levels	24%
A decrease	20%
Don't know	**27%**

Base: 92

Q22. How were in-lab titrations impacted at your facility due to the COVID-19 pandemic? **(RESPONDENTS AT SLEEP CENTERS WHO CURRENTLY SUPERVISE OR PREVIOUSLY SUPERVISED SLEEP TECHNOLOGY PROFESSIONALS)**



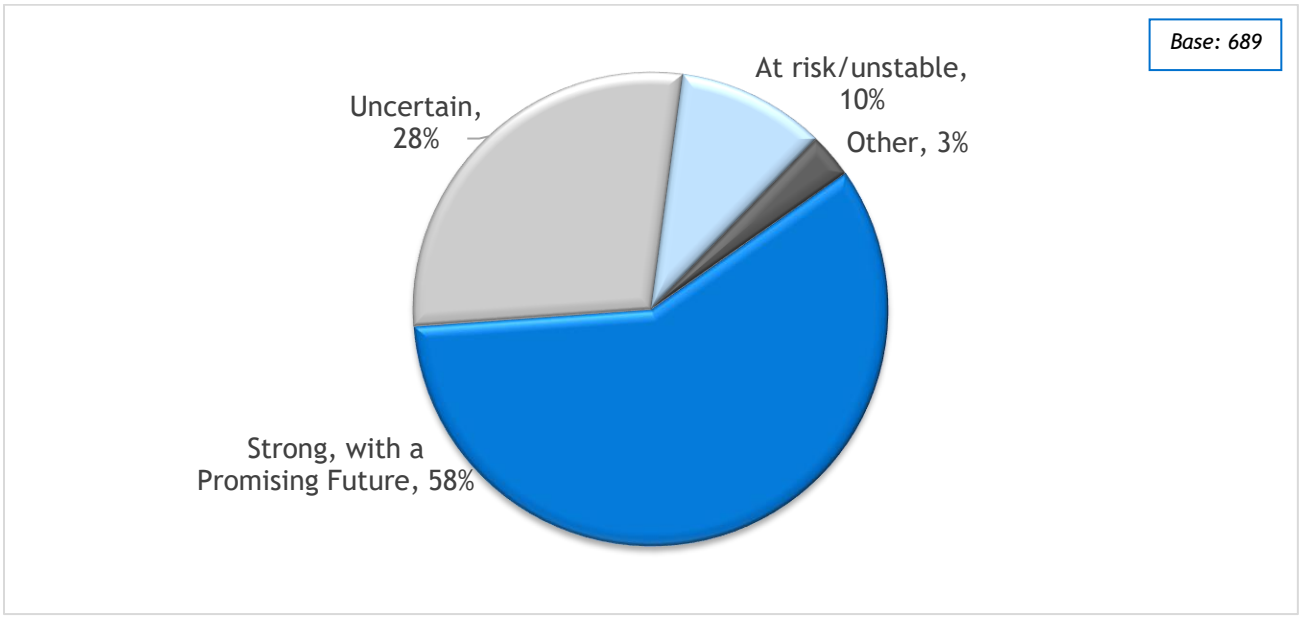
Q23. What percentage of in-lab titrations are you currently performing? **(RESPONDENTS AT SLEEP CENTERS WHO CURRENTLY SUPERVISE OR PREVIOUSLY SUPERVISED SLEEP TECHNOLOGY PROFESSIONALS AT FACILITIES CURRENTLY PERFORMING IN-LAB TITRATIONS)**

Mean Percentage	Median Percentage	Base
60%	57%	569

Survey Results

Q24. What do you believe is the outlook for your sleep center? **(RESPONDENTS AT SLEEP CENTERS WHO CURRENTLY SUPERVISE OR PREVIOUSLY SUPERVISED SLEEP TECHNOLOGY PROFESSIONALS)**

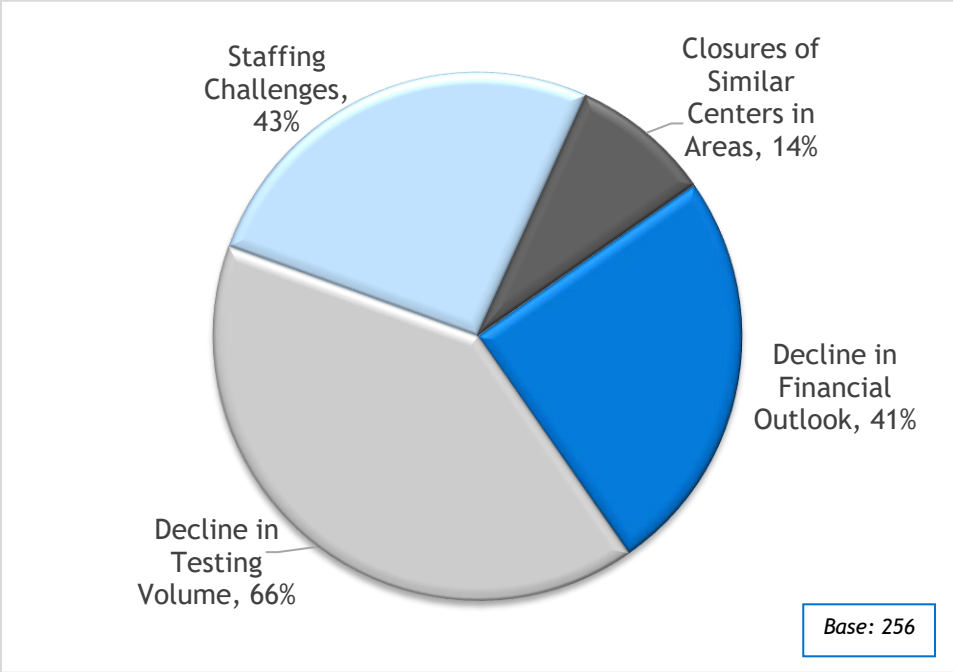
Roughly two-thirds of sleep managers/directors and clinical coordinators believed the outlook for their sleep center was strong, compared with 57% of polysomongraphic technologists and 42% of polysomnographic technicians.



Other - 23 open-end responses received. Most common themes include increase in home sleep studies resulting in fewer in-lab studies, concerns about role of insurance companies in testing and treatment, promising future for pediatric testing, concerns about management, and lab closures.

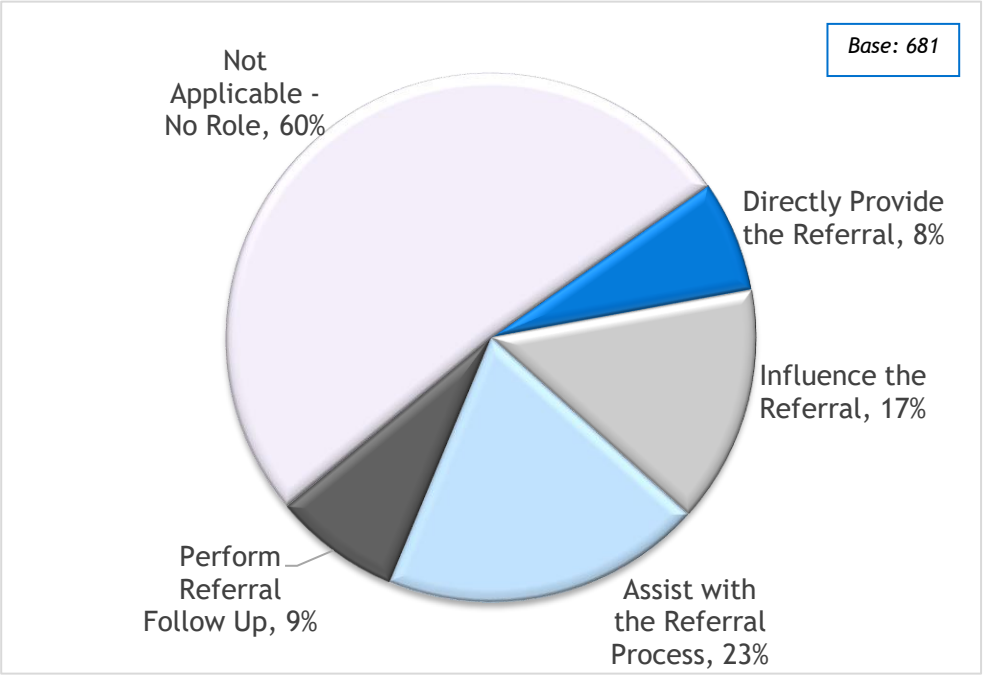
Survey Results

Q25. What is this sentiment based on? (Please select all that apply.) **(RESPONDENTS AT SLEEP CENTERS WHO CURRENTLY SUPERVISE OR PREVIOUSLY SUPERVISED SLEEP TECHNOLOGY PROFESSIONALS, WHO ANSWERED "AT RISK" OR "UNCERTAIN" TO Q24)**



Q26. What is your role in referring patients for additional treatment? (Please select all that apply.) **(RESPONDENTS AT SLEEP CENTERS WHO CURRENTLY SUPERVISE OR PREVIOUSLY SUPERVISED SLEEP TECHNOLOGY PROFESSIONALS)**

The majority of polysomongraphic technologists and polysomnographic technicians (75% and 64%, respectively), and 36% of sleep managers/directors, have no role in referrals.



Survey Results

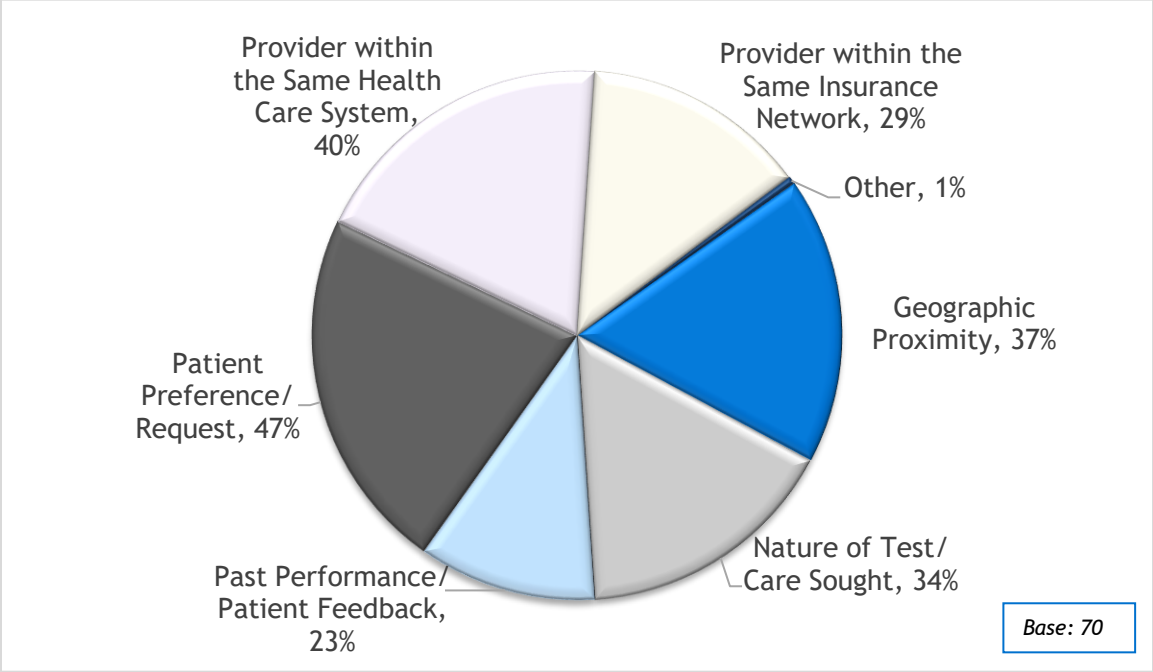
Q27. Where do you refer patients for sleep studies? (Please select all that apply.) **(RESPONDENTS AT SLEEP CENTERS WHO CURRENTLY SUPERVISE OR PREVIOUSLY SUPERVISED SLEEP TECHNOLOGY PROFESSIONALS, WHO INDICATED A ROLE IN REFERRALS IN Q26)**

Base: 149

Referral Location	Proportion of Respondents
Hospital-based Sleep Center (On-campus)	15%
Hospital-affiliated Sleep Center (Off-campus)	11%
Physician-owned Sleep Center	21%
Not Applicable - I Do Not Provide Referrals	**52%**
Other (Please specify.)	8%

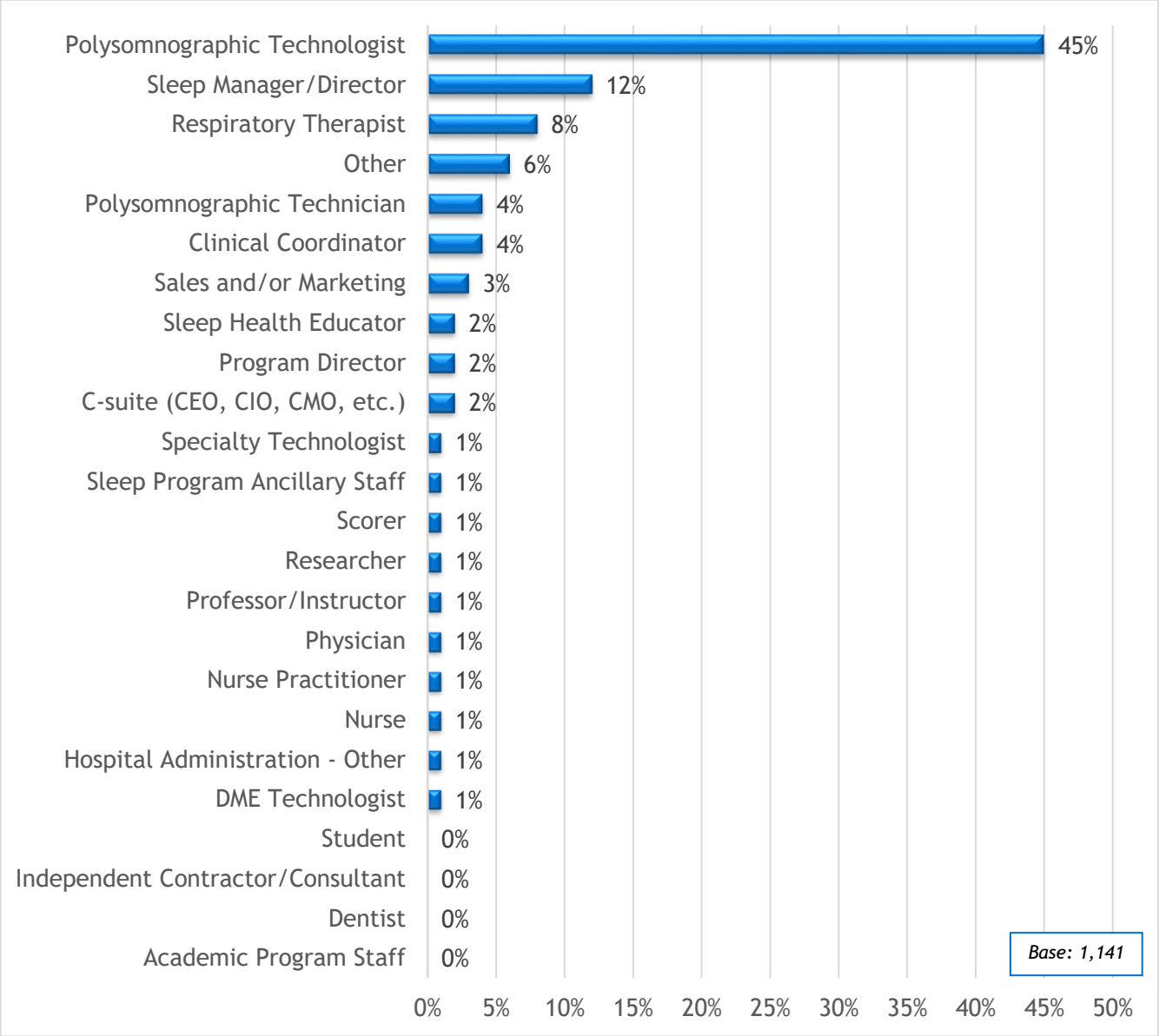
Other - 12 open-end responses received. Most common included: VA medical centers, own labs, private facilities, and home sleep companies.

Q28. On what considerations are referrals based? (Please select all that apply): **(RESPONDENTS AT SLEEP CENTERS WHO CURRENTLY SUPERVISE OR PREVIOUSLY SUPERVISED SLEEP TECHNOLOGY PROFESSIONALS, WHO INDICATED A ROLE IN REFERRALS IN Q26)**



Survey Results

Q29. Which of the following best describes your current position: **(ALL RESPONDENTS)**

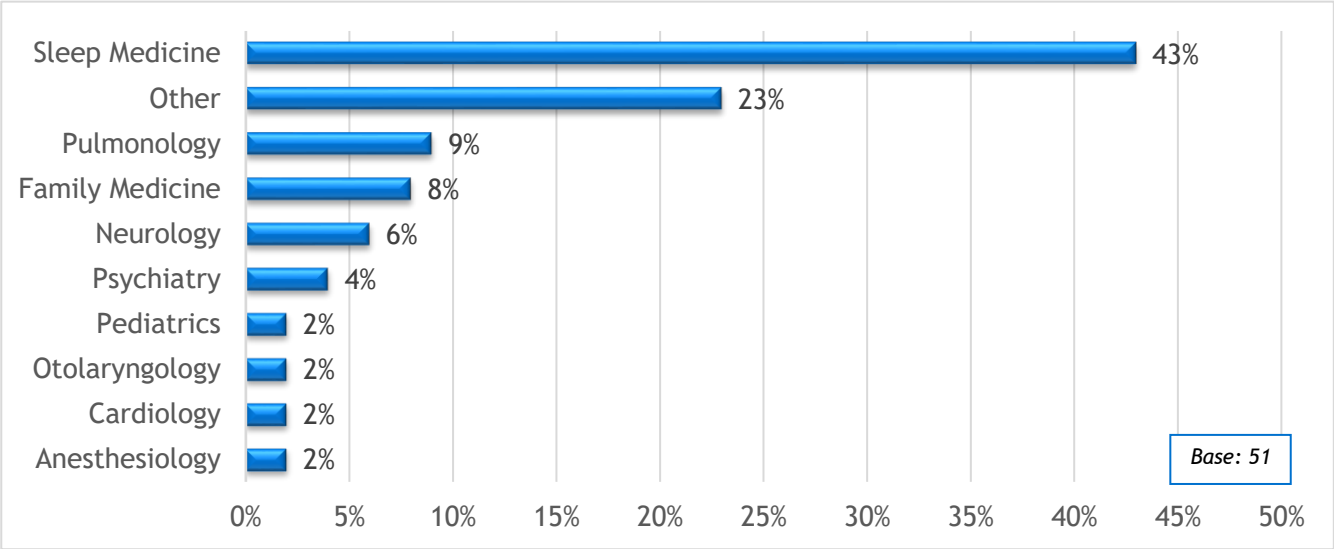


Note: Insufficient data or no data provided for Dental Hygienist, Medical Assistant, Polysomnographic Trainee or Psychologist.

Other - 73 open-end responses received. Most common included: Retired, unemployed, owner, office/clerical staff, educator/instructor and specific clinical and administrative roles.

Survey Results

Q30. What is your specialty? **(RESPONDENTS WHO ANSWERED "NURSE," "NURSE PRACTITIONER," "PHYSICIAN" OR "RESEARCHER" TO Q29)**



Other - 12 open-end responses included public health, research, hospice and home care.

Q31. Please indicate the highest level of education achieved: **(RESPONDENTS WHO ANSWERED "CLINICAL COORDINATOR," "DME TECHNOLOGIST," "MEDICAL ASSISTANT," "NURSE," "NURSE PRACTITIONER," "PHYSICIAN." "POLYSOMNOGRAPHIC TECHNOLOGIST," "POLYSOMNOGRAPHIC TECHNICIAN," "POLYSOMNOGRAPHIC TRAINEE," "RESEARCHER," "RESPIRATORY THERAPIST," "SCORER," "SLEEP HEALTH EDUCATOR," "SLEEP PROGRAM ANCILLARY STAFF," "SPECIALTY TECHNOLOGIST" TO Q29. IN FUTURE REFERENCES = Q31 GROUP)**

The majority of clinical coordinators (54%) held Bachelor's or more advanced degrees, compared with 38% of respiratory therapists and sleep health educators and 35%-40% of technologists and technicians.

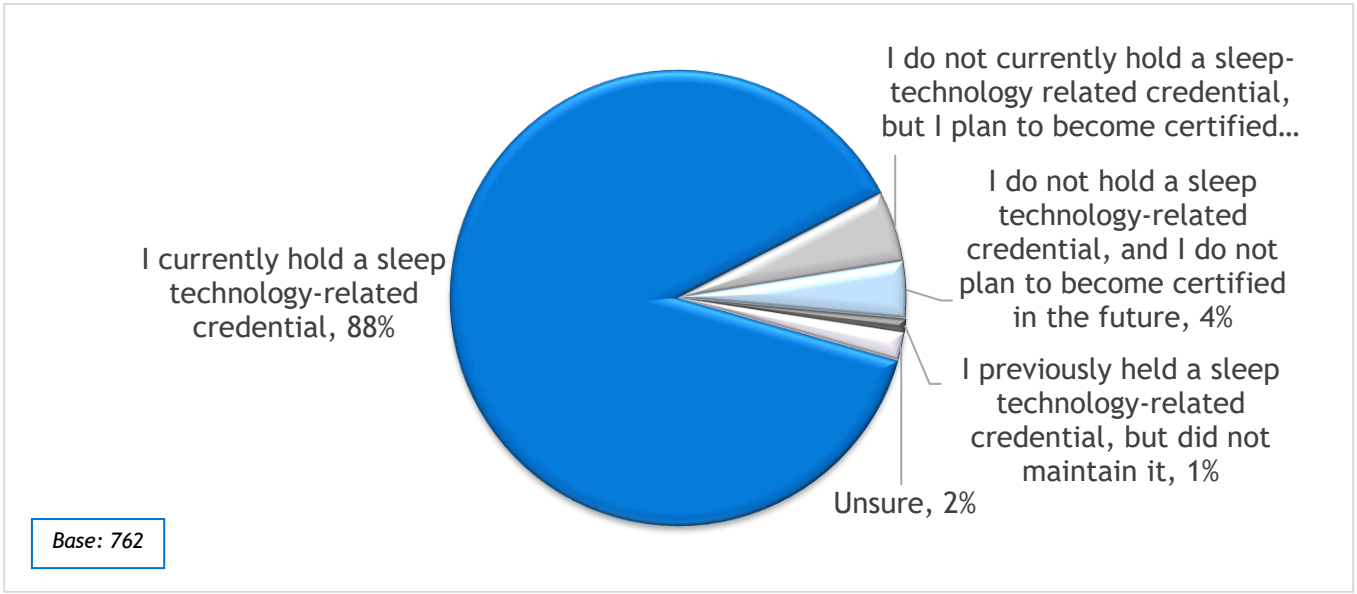
Education Level	Proportion of Respondents
Some High School	*
High School Diploma	3%
Some College or Technical Training	21%
Technical or Junior College Degree	8%
Associate's Degree	**30%**
Bachelor's Degree (Four-Year College Degree)	**30%**
Master's Degree	5%
Professional Degree (MD, JD, M.Ed., etc.)	2%
Doctoral Degree (PhD)	1%

* = Insufficient data.

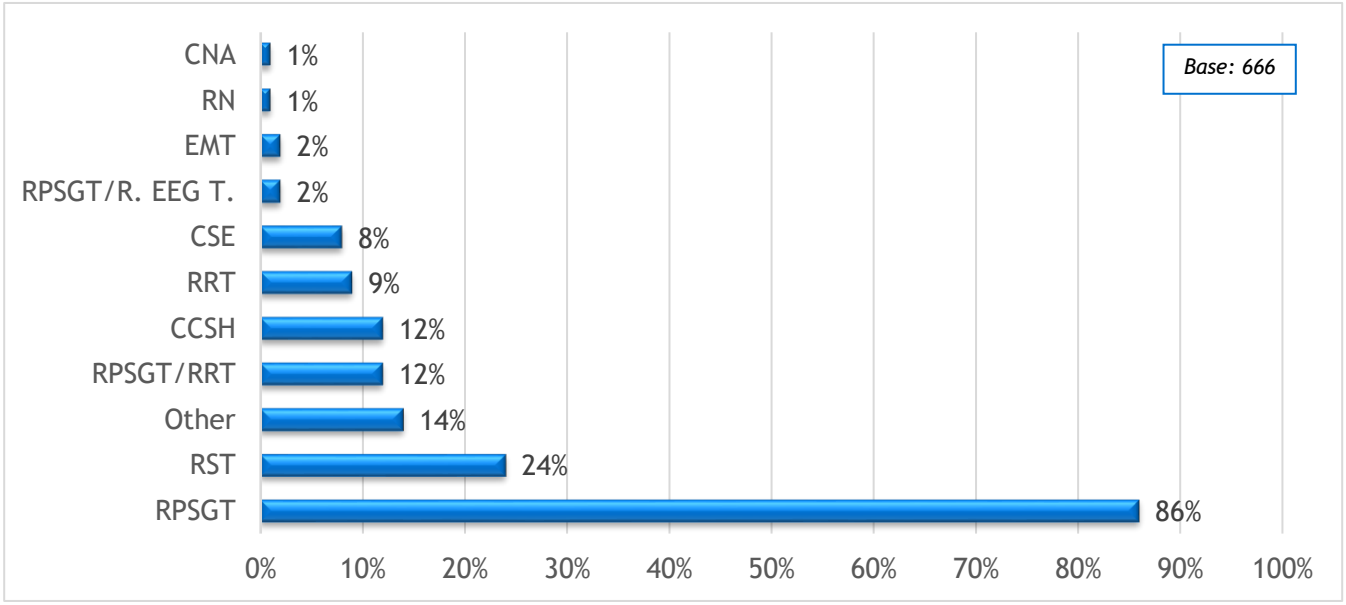
Base: 763

Survey Results

Q32. Which of the following best describes you? **(Q31 GROUP)**
Approximately two-thirds of respiratory therapists held a sleep technology-related credential, or did not hold one and did not plan to become certified in the future.



Q33. Please indicate all the sleep technology-related credentials or certifications you currently hold: **(Q31 GROUP WHO INDICATED THEY HOLD A CREDENTIAL IN Q32)**
72% or more of technologists and technicians, sleep health educators, scorers, and clinical coordinators hold their RPSGT.

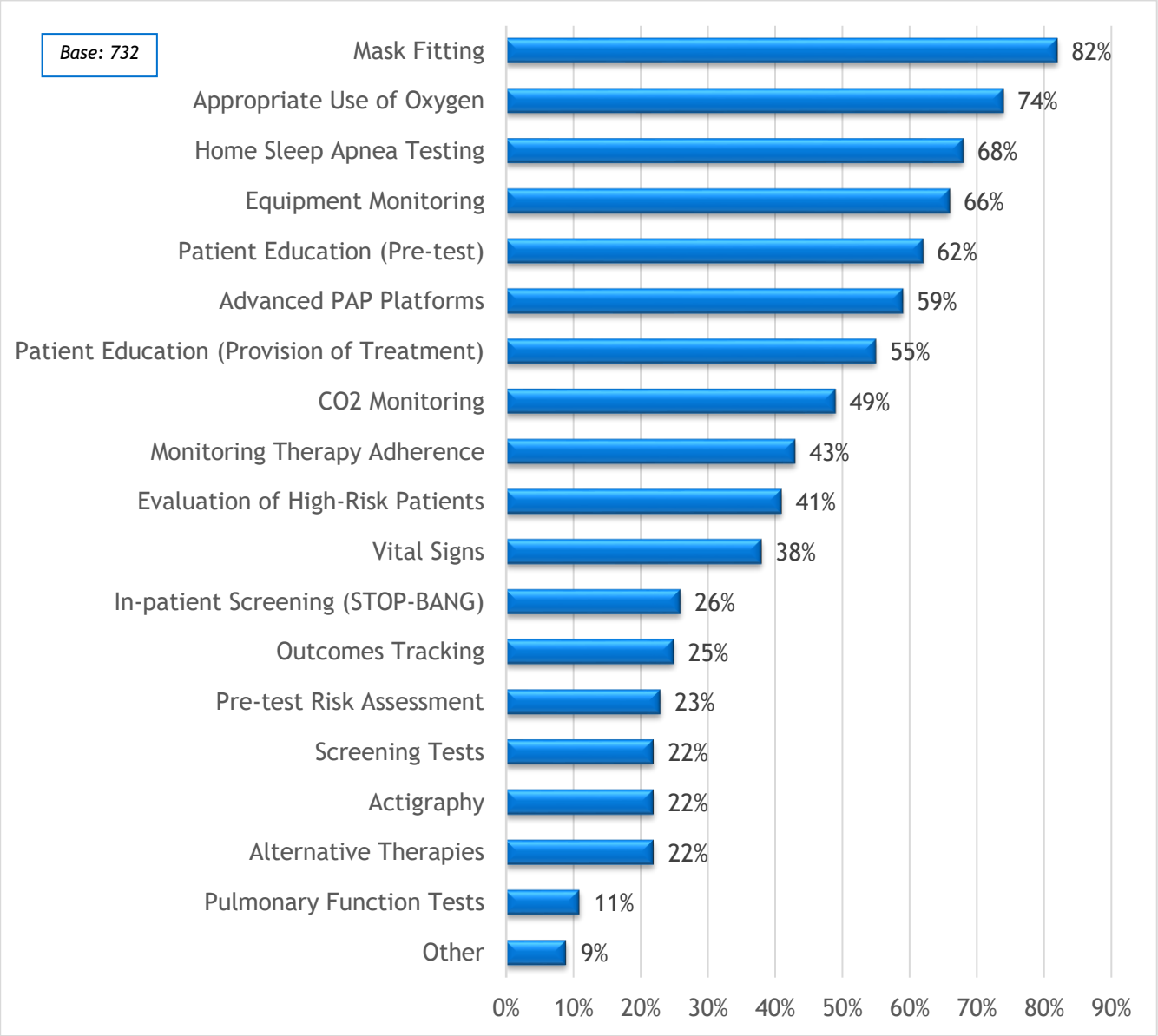


**While CSE is a certificate program, it was included as an option due to the possible prevalence with sleep technology professionals.*

Other - 92 open-end responses. Most common included: CRT, LPN, CRTT, CPSGT, and RRT-SDS.

Survey Results

Q34. Please indicate all the tasks you perform at your facility (select all that apply): **(Q31 GROUP)**



Other - 64 open-end responses received. Most common included: Scoring of sleep studies, writing sleep study reports, titration, EEGs, CPAP, BIPAP, ASV, PAP set up, Inspire therapy, post-test education, unemployed and retired.

Survey Results

Q34. Please indicate all the tasks you perform at your facility (select all that apply): **(Q31 GROUP) - CONTINUED**

SIGNIFICANT DIFFERENCES BY RESPONDENT POSITION

	Actigraphy	Advanced PAP Platforms	CO2 Monitoring	Equipment Monitoring	Evaluation of High-Risk Patients	Home Sleep Apnea Testing	In-patient Screening (STOP-BANG)	Mask Fitting
Clinical Coordinator	17%	71%	42%	69%	73%	85%	40%	85%
DME Technologist	0%	0%	0%	63%	13%	25%	0%	88%
Polysomno-graphic Technologist (RPSGT or equivalent)	25%	63%	52%	67%	40%	71%	27%	82%
Polysomno-graphic Technician	36%	48%	57%	68%	41%	64%	39%	75%
Respiratory Therapist	6%	37%	32%	62%	33%	45%	15%	87%
Scorer	7%	53%	60%	73%	40%	67%	33%	80%
Sleep Health Educator	38%	75%	38%	58%	58%	67%	38%	92%

	Monitoring Therapy Adherence	Outcomes Tracking	Patient Education (Pre-Test)	Patient Education (Provision of Treatment)	Pre-Test Risk Assessment	Pulmonary Function Tests	Screening Tests
Clinical Coordinator	69%	56%	77%	77%	48%	17%	31%
DME Technologist	50%	13%	13%	50%	0%	13%	0%
Polysomno-graphic Technologist (RPSGT or equivalent)	34%	19%	65%	51%	21%	9%	21%
Polysomno-graphic Technician	36%	14%	57%	52%	18%	9%	23%
Respiratory Therapist	76%	37%	48%	65%	13%	23%	11%
Scorer	53%	40%	48%	79%	33%	13%	20%
Sleep Health Educator	75%	63%	75%	79%	58%	13%	50%

Survey Results

Q35. What is currently your role in remote Continuous Positive Airway Pressure Therapy (CPAP) set up? Please select all that apply. **(Q31 GROUP)**

35% of technicians and technologists, scorers and clinical coordinators work at a sleep center that does not offer remote CPAP.

Role	Proportion of Respondents
Use remote patient set up program	18%
Initiate remote set up personally	13%
No role in remote CPAP set up	**44%**
Sleep center doesn't offer remote CPAP	35%

Base: 743

Q36. Do you anticipate that your lab will offer remote CPAP adherence monitoring in the future? **(Q31 GROUP)**

Response Option	Proportion of Respondents
Yes	12%
No	19%
Don't know	**70%**

Base: 231

Q37. Do you anticipate that you will have a role in remote CPAP adherence monitoring in the future? **(Q31 GROUP)**

Significantly more respiratory therapists (44%) indicated they will have a role in remote CPAP adherence monitoring in the future than other respondents.

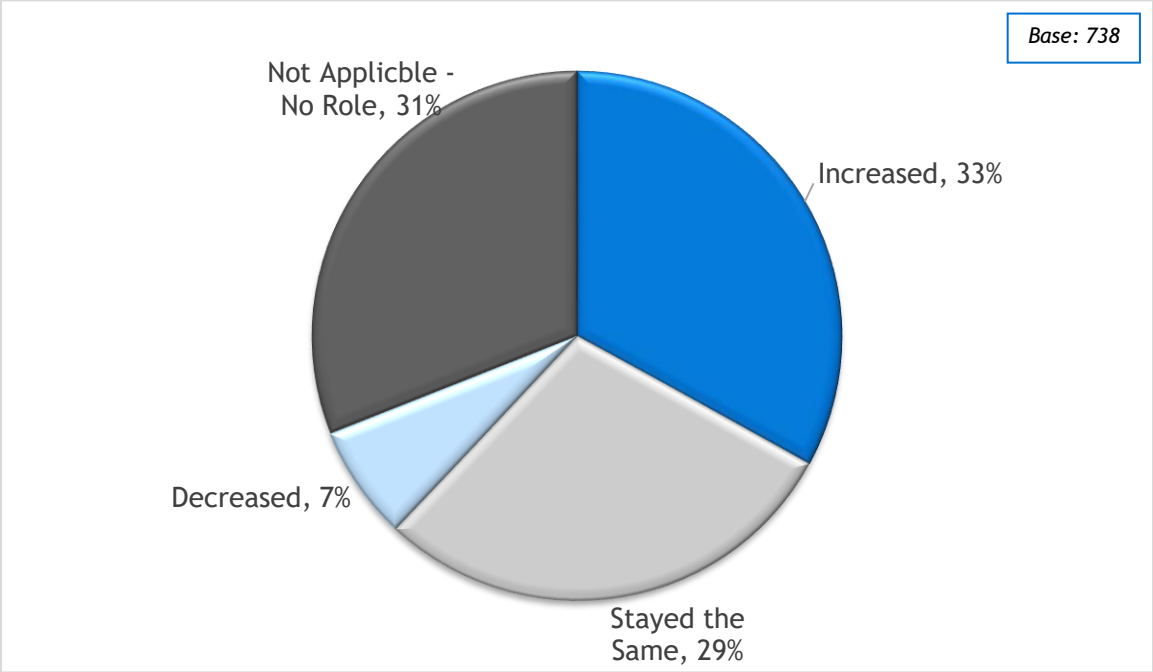
Response Option	Proportion of Respondents
Yes	20%
No	25%
Don't know	**55%**

Base: 545

Survey Results

Q38. How has your role in PATIENT SCREENING changed in the PAST 3-5 YEARS: **(Q31 GROUP)**

More clinical coordinators (54%) and respiratory therapists (45%) noted an increased role in patient screening the last 3-5 years than polysomnographic technologists (29%) and polysomnographic technicians (27%).



Q39. Who was performing this task BEFORE? **(Q31 GROUP WHO INDICATED INCREASE IN Q38)**

Response Option	Proportion of Respondents
Medical Assistant	24%
Nurse	9%
Nurse Practitioner	5%
Physician	**40%**
Other	21%

Base: 230

Other - 48 open-end responses. Most common included: Respiratory therapist, customer service representative or other non-credentialed staff, manager/director, sleep technologist or scientist, nurses, unknown, and done elsewhere.

Survey Results

Q40. Who is performing this task NOW? **(Q31 GROUP WHO INDICATED DECREASE IN Q38)**

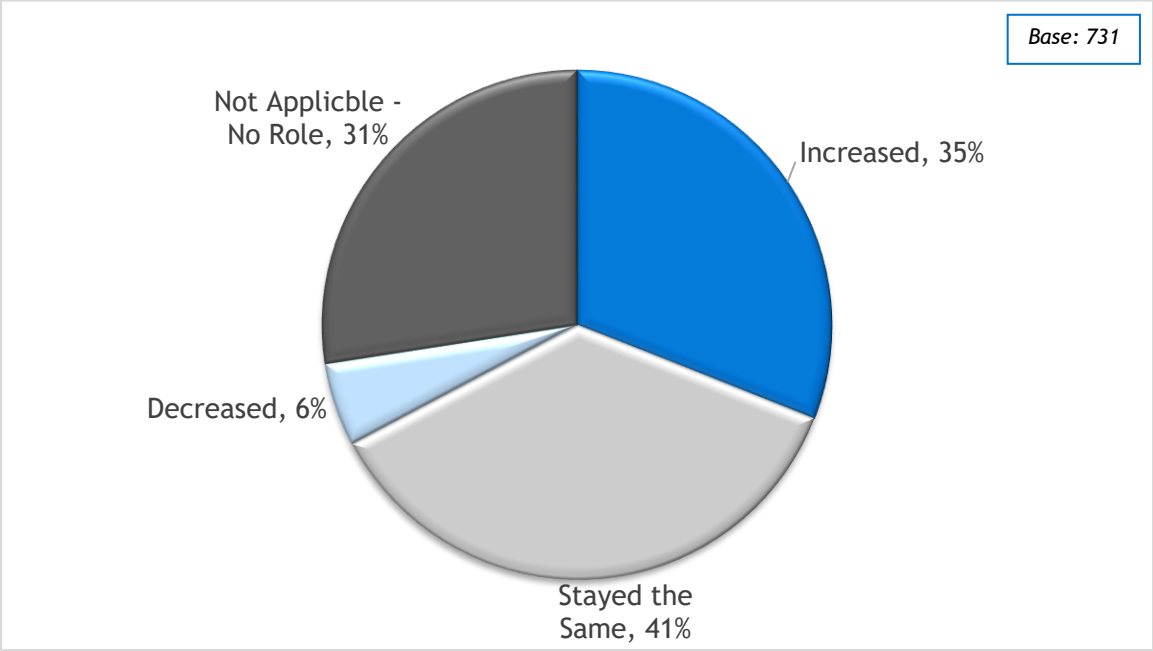
Response Option	Proportion of Respondents
Medical Assistant	19%
Nurse	4%
Nurse Practitioner	10%
Physician	**40%**
Other	27%

Base: 48

Other - 12 open-end responses. Most common included: No one, not sure, sleep technician and supervisor/manager.

Q41. How has your role in PATIENT EDUCATION (Pre-test) changed in the PAST 3-5 YEARS: **(Q31 GROUP)**

More clinical coordinators (54%) and respiratory therapists (55%) have increased their roles in patient education (pre-test) the last 3-5 years than polysomnographic technologists (31%) and polysomnographic technicians (22%).



Survey Results

Q42. Who was performing this task BEFORE? **(Q31 GROUP WHO INDICATED INCREASE IN Q41)**

Response Option	Proportion of Respondents
Medical Assistant	13%
Nurse	11%
Nurse Practitioner	9%
Physician	**42%**
Other	25%

Base: 244

Other - 61 open-end responses. Most common included: No one, not sure, respiratory therapist, sleep technologist, DME, staff educators, physicians, physiologists, all of the above, clerk/admin assistants, office manager, nurse practitioner and owner.

Q43. Who is performing this task NOW? **(Q31 GROUP WHO INDICATED DECREASE IN Q41)**

Response Option	Proportion of Respondents
Medical Assistant	13%
Nurse	18%
Nurse Practitioner	8%
Physician	18%
Other	**45%**

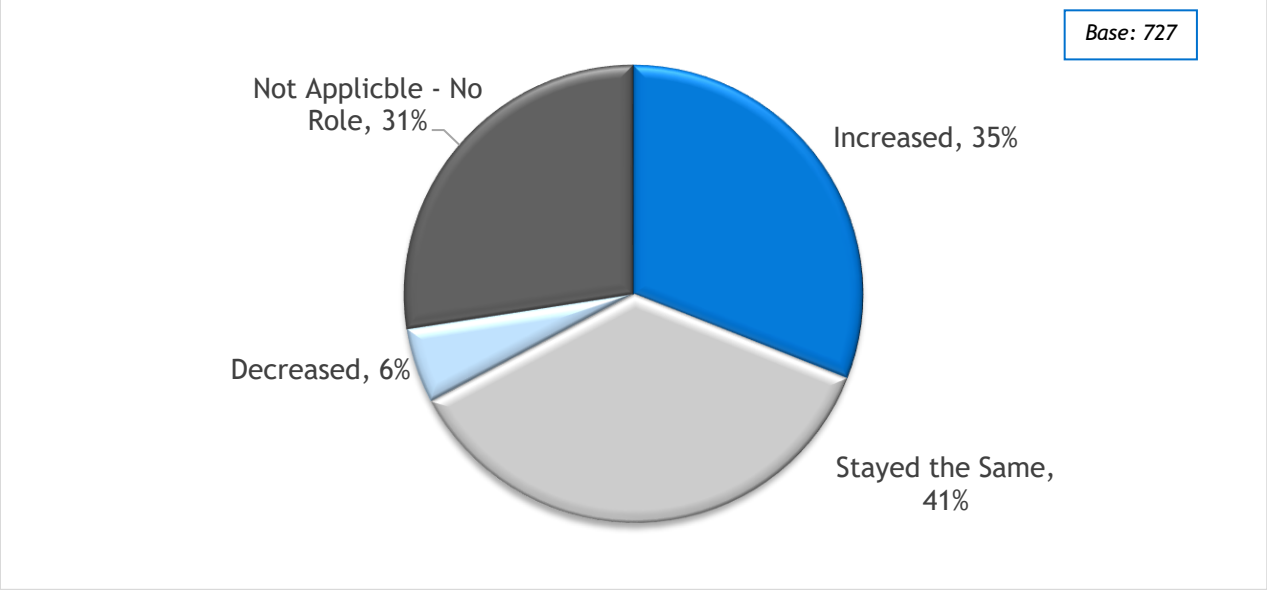
Base: 40

Other - 18 open-end responses. Most common included: No one, DME, sleep technologists, respiratory therapists, supervisor and scheduler.

Survey Results

Q44. How has your role in PATIENT EDUCATION (Provision of Treatment) changed in the PAST 3-5 YEARS: **(Q31 GROUP)**

More clinical coordinators (59%) and respiratory therapists (55%) have increased their roles in patient education (provision of treatment) the last 3-5 years than polysomnographic technologists (29%) and polysomnographic technicians (29%).



Q45. Who was performing this task BEFORE? **(Q31 GROUP WHO INDICATED INCREASE IN Q44)**

Response Option	Proportion of Respondents
Medical Assistant	9%
Nurse	7%
Nurse Practitioner	13%
Physician	**44%**
Other	27%

Base: 247

Other - 66 open-end responses. Most common included: respiratory therapist, no one, DME, sleep technologists, sleep technicians, physicians, lab staff (including manager and owner) and all of the above.

Survey Results

Q46. Who is performing this task NOW? **(Q31 GROUP WHO INDICATED DECREASE IN Q44)**

Response Option	Proportion of Respondents
Medical Assistant	9%
Nurse	23%
Nurse Practitioner	6%
Physician	2%
Other	**37%**

Base: 35

Other - 13 open-end responses. Most common included: No one, DME and sleep technologist.

Q47. How do you anticipate that your role in these tasks will change in the NEXT 3-5 YEARS? **(Q31 GROUP)**

More clinical coordinators (72%) and respiratory therapists (51%) anticipate their roles in these tasks will continue to increase the next 3-5 years than polysomnographic technologists (40%).

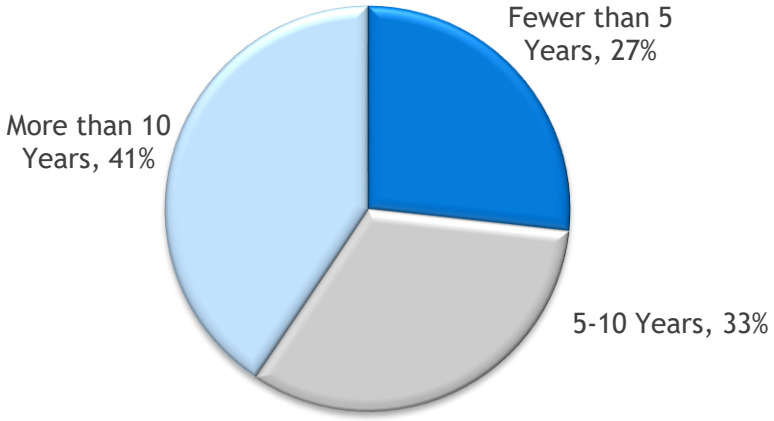
Task	Continue/New Increase	No Change	Continue/New Decrease
Patient Screening	45%	30%	5%
Patient Education (Pre-test)	48%	34%	4%
Patient Education (Provision of Treatment)	51%	33%	3%

Base: 706

Q48. How long do you intend to stay in the sleep profession? **(Q31 GROUP)**

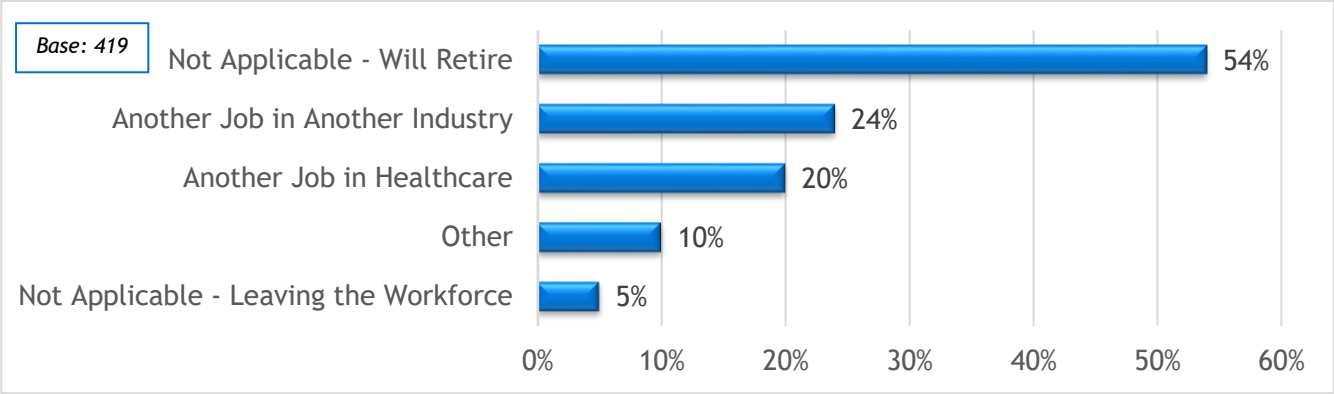
55% of clinical coordinators indicated 10+ years, while 27% of polysomnographic technologists, 28% of respiratory therapists and 34% of polysomnographic technicians responded fewer than 5 years.

Base: 713



Survey Results

Q49. To what field/profession are you planning to transition? **(Q31 GROUP WHO ANSWERED FEWER THAN 10 YEARS)**



Other - 43 Open-end responses. Most common included: Retired/retirement, part time/PRN and unsure/not sure. (43)

Q50. Who performs the tasks below at your sleep center or the sleep center you are most closely affiliated with? (Please select all that apply.) **(THOSE WHO ANSWERED "DENTIST," "HOSPITAL ADMINISTRATION - OTHER," "PSYCHOLOGIST," "SLEEP MANAGER/DIRECTOR" IN Q29. IN FUTURE REFERENCES = Q50 GROUP)**

	Patient Screening	Patient Education (Pre-test)	Sleep Therapy Referral	Patient Education (Provision of Treatment)
Medical Assistant	12%	7%	4%	3%
Nurse	5%	6%	4%	6%
Nurse Practitioner	6%	4%	8%	7%
Respiratory Therapist	4%	9%	3%	15%
Sleep Technologist	18%	46%	9%	30%
Sleep Health Educator / CCSH	3%	6%	2%	8%
Sleep Center Manager/ Director	8%	3%	5%	7%
Physician	36%	17%	59%	21%
Don't Know/ Not Sure	7%	5%	5%	5%

Base: 203

Survey Results

Q51. How HAS the role of the Sleep Technologist in these tasks changed in the PAST 3-5 years? **(Q50 GROUP)**

Task	Increased	Stayed the Same	Decreased	N/A
Patient Screening	41%	40%	7%	13%
Patient Education (Pre-test)	43%	42%	8%	7%
Patient Education (Provision of Treatment)	42%	42%	8%	9%

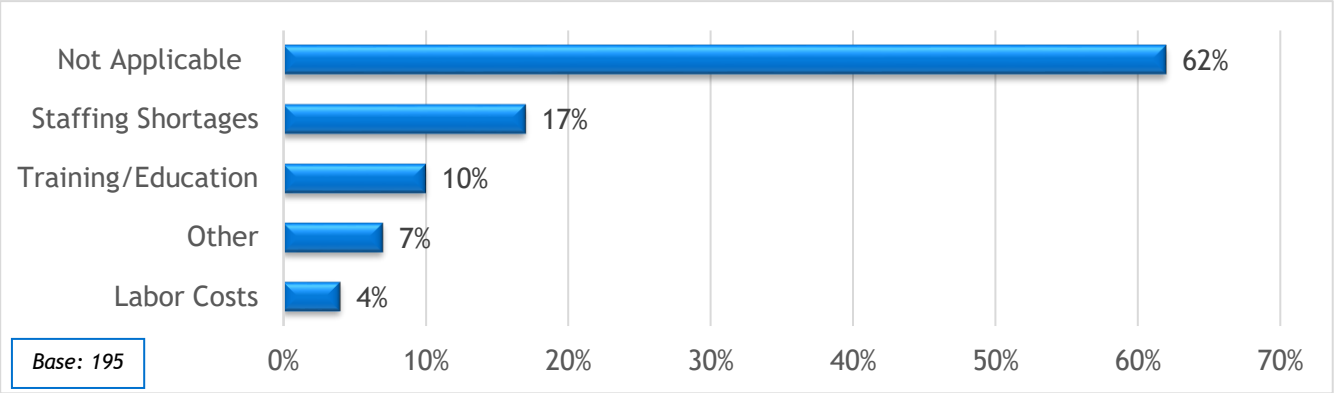
Base: 202

Q52. How WILL the role of the Sleep Technologist in these tasks change in the NEXT 3-5 years? **(Q50 GROUP)**

Task	Increased	Stayed the Same	Decreased	N/A
Patient Screening	52%	30%	12%	7%
Patient Education (Pre-test)	56%	30%	10%	5%
Patient Education (Provision of Treatment)	57%	30%	9%	9%

Base: 201

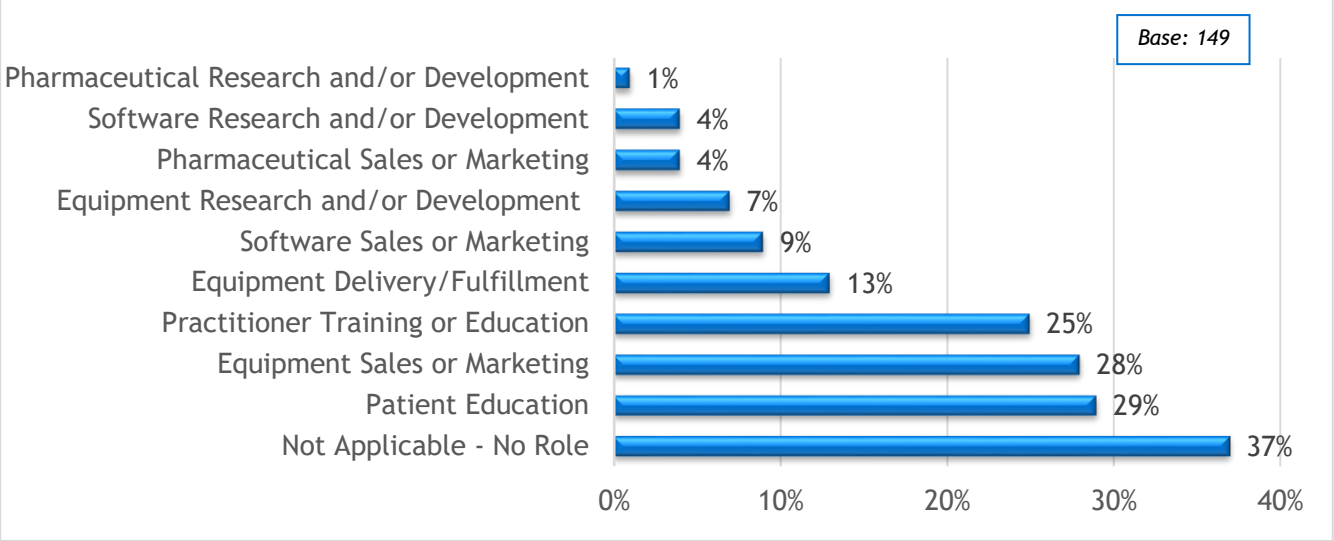
Q53. If you have recently shifted or anticipate shifting work FROM Sleep Technologists to other professionals, please indicate your primary motivations for doing so: **(Q50 GROUP)**



Other - 13 open-end responses. Most common included reduction of in-lab tests and increase in home-sleep testing. (13)

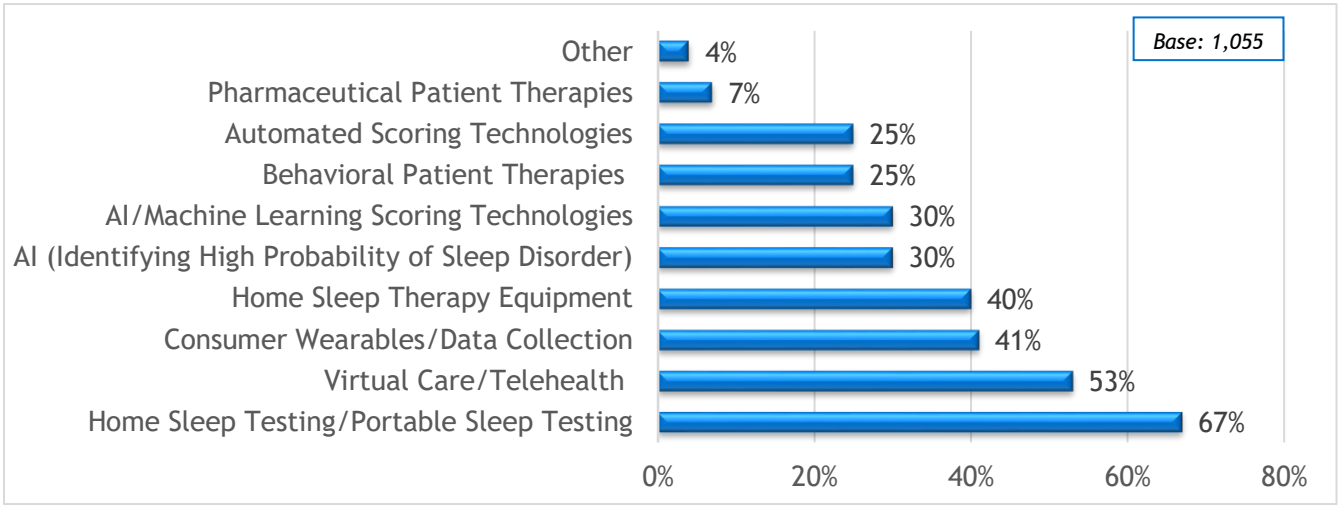
Survey Results

Q54. Please indicate your role in the diagnosis or delivery of sleep medicine: (Please select all that apply.) **(Q50 GROUP)**



Q55. In which of these areas do you see the greatest growth opportunities in the field of sleep technology? (Please select your TOP THREE.) **(ALL RESPONDENTS)**

Significantly more respiratory therapists (65%) than technicians and technologists, sleep health educators, and sleep center managers/directors indicated home sleep therapy equipment, while more scorers (57%) and sleep health educators (54%) indicated behavioral patient therapies. The majority of C-suite (63%) and sales/marketing respondents (58%) indicated consumer wearables/data collection.

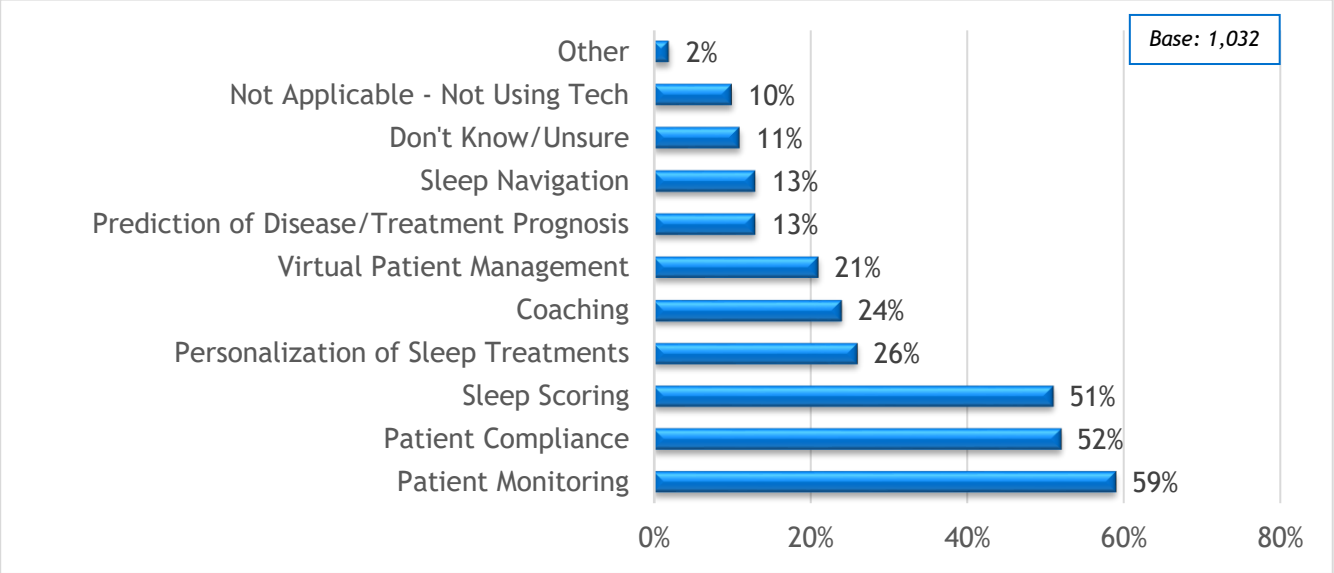


Other - 42 open-end responses. Most common included: In-lab testing, dental devices/sleep medicine, sleep education, patient compliance, surgical intervention, accuracy of home-sleep testing and disease management.

Survey Results

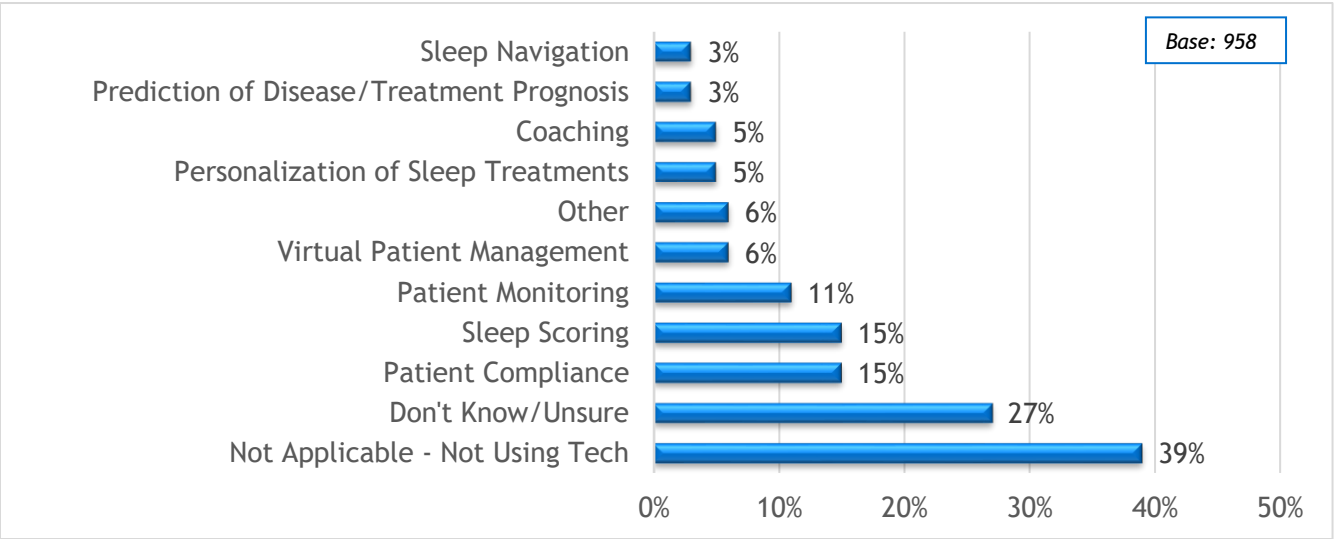
Q56. In which areas is technology CURRENTLY being used in your sleep center or the sleep center with which you are most closely affiliated? (Please select all that apply.) **(ALL RESPONDENTS)**

More clinical coordinators (52%) were using technology for coaching, and more sleep health educators (46%) were using technology for sleep navigation, than those in other roles.



Other - 22 open-end responses. Most common included: Not applicable, patient education, remote sleep test scoring, telemedicine visits and patient tracking.

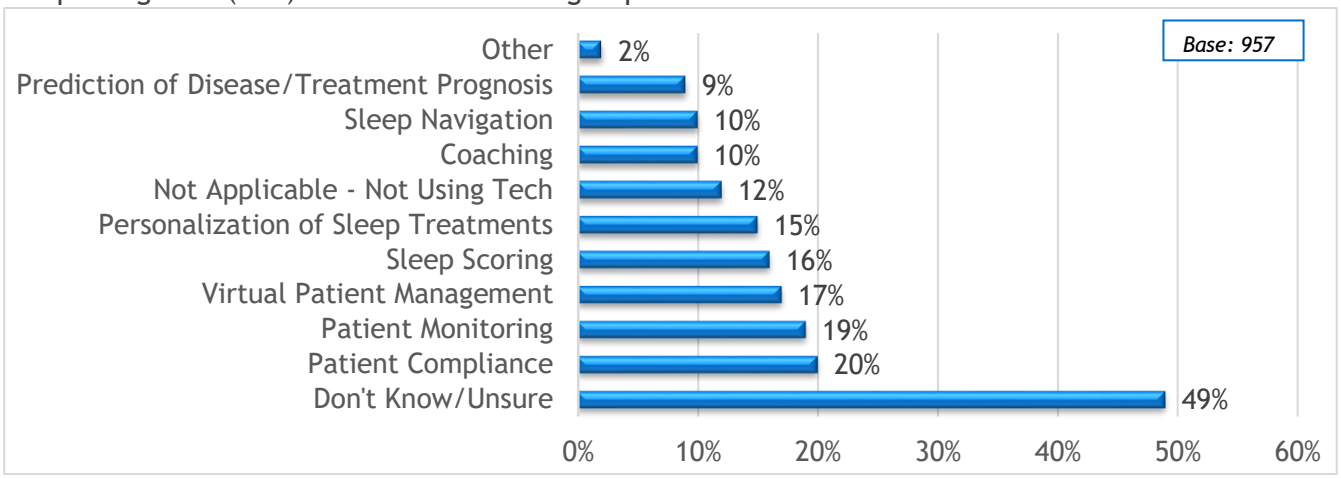
Q57. In which areas are you CURRENTLY outsourcing the use of technology in your sleep center or the sleep center with which you are most closely affiliated? (Please select all that apply.) **(ALL RESPONDENTS)**



Other - 57 open-end responses. Most common included: Not applicable, DME, home-sleep testing and remote scoring.

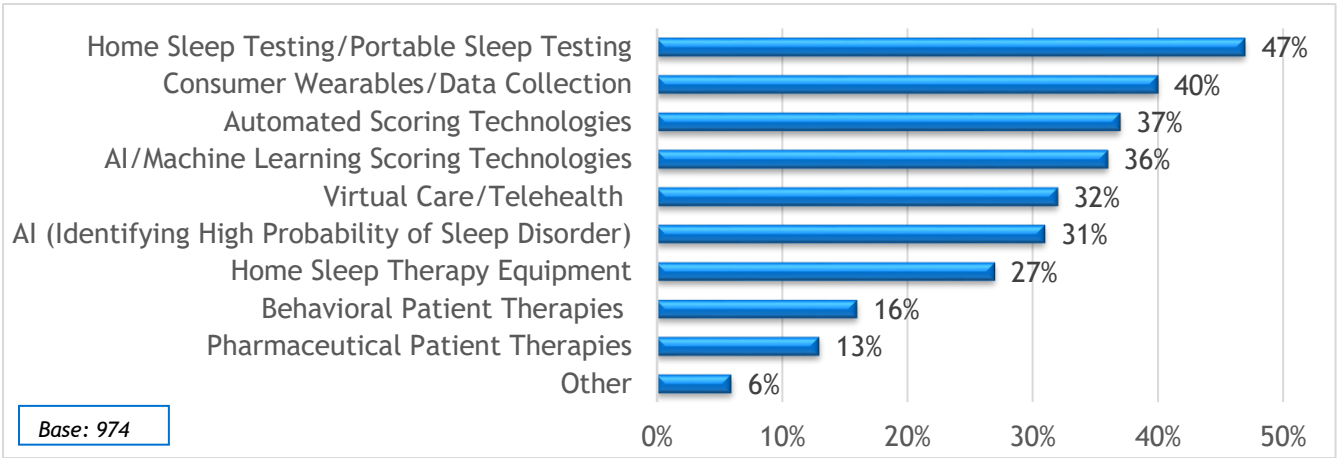
Survey Results

Q58. In which areas are there plans to implement technology within the next 3-5 years in your sleep center or the sleep center with which you are most closely affiliated? (Please select all that apply.) **(ALL RESPONDENTS)**
More C-suite respondents indicated there were plans to implement technology in the areas of prediction of disease/treatment prognosis (33%), personalization of sleep treatments (53%) and sleep navigation (33%) than those in other groups.



Other - 20 open-end responses. Most common included: Not applicable and already using technology

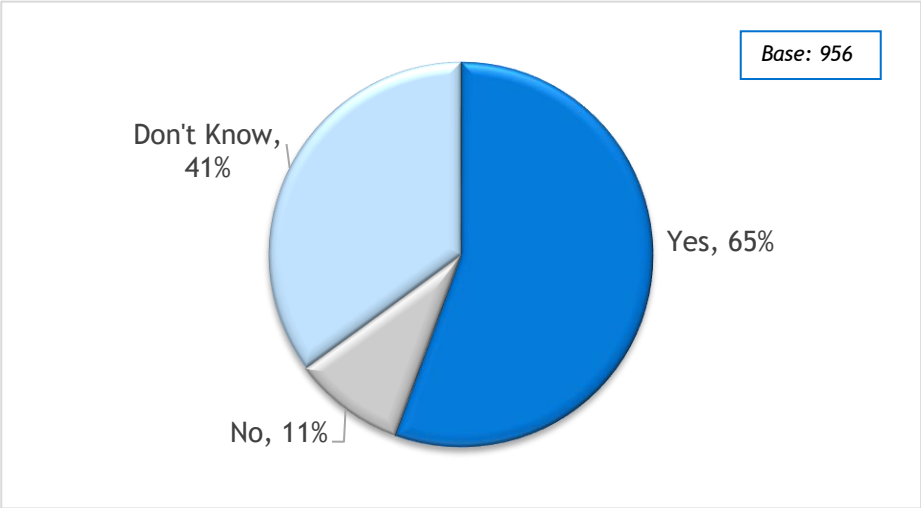
Q59. What are the greatest challenges or trends you anticipate the field of sleep technology will face in the NEXT 3-5 YEARS. (Please select your TOP THREE.) **(ALL RESPONDENTS)**
The majority of program directors (72%) said home sleep testing/portable sleep testing, while the majority of C-suite (53%) and clinical coordinator respondents (61%) said consumer wearables. More respiratory therapists indicated virtual care/telehealth, and more sleep health educators cited pharmaceutical patient therapies, than other respondent groups.



Other - 57 open-end responses. Most common included: Staffing (lack of physicians, sleep educators and qualified technologists), insurance/reimbursement, unsure/unknown, pandemic recovery and home-sleep testing.

Survey Results

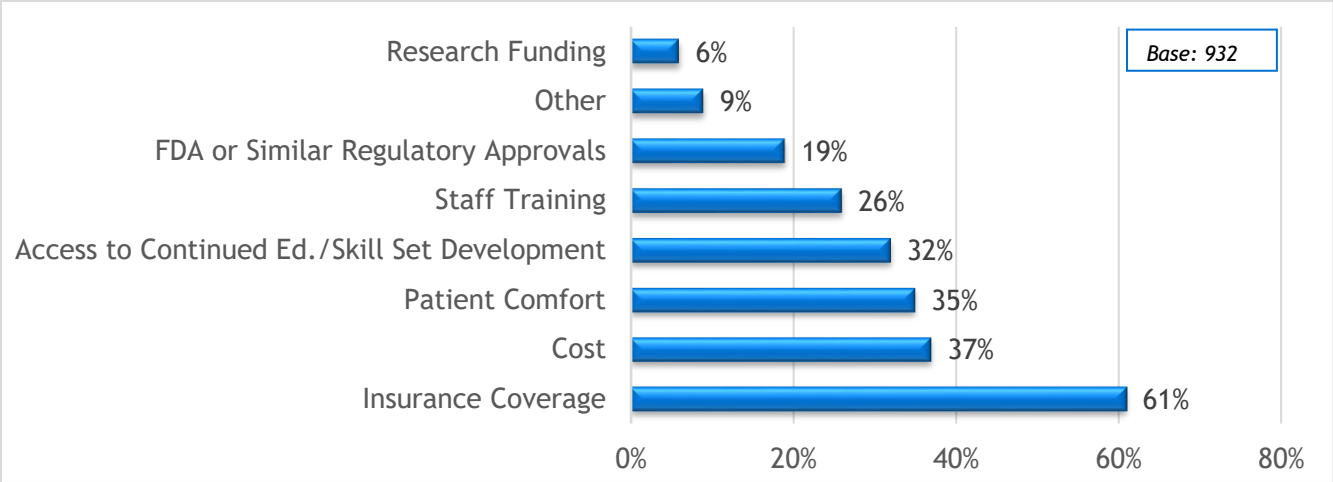
Q60. Do you believe that remote CPAP (adherence monitoring) is the future of healthcare delivery? **(ALL RESPONDENTS)**



Significantly fewer technologists and technicians (between 45%-56%) believed that remote CPAP monitoring is the future of healthcare than those in other roles.

Q61. What are the greatest barriers to the utilization of these advancements? **(ALL RESPONDENTS)**

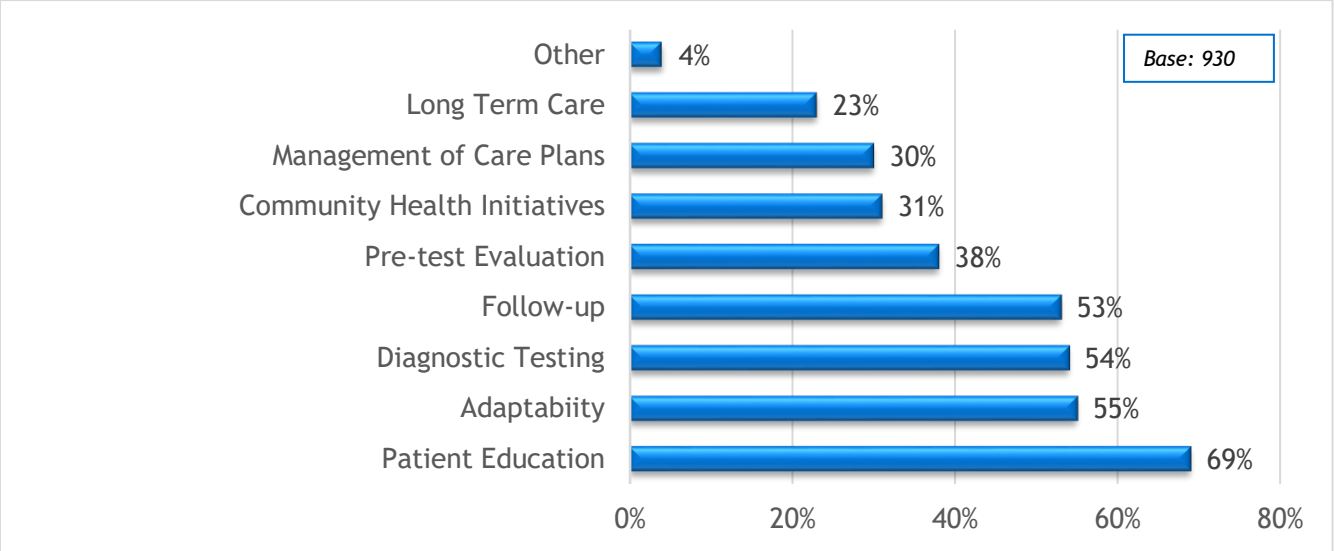
Significantly fewer sleep managers/directors (20%) and program directors (11%) cited patient comfort as a barrier than other groups, and significantly fewer of those in C-suite (7%) cited access to continued education skill set development than other groups.



Other - 86 open-end responses. Most common included: Unsure/don't know, not applicable, internet access, patient education/compliance/adherence, insurance coverage/reimbursement, staffing (lack of trained staff), integration of technology or data, inefficacy due to lack of one-on-one care, lack of regulation and provider comfort.

Survey Results

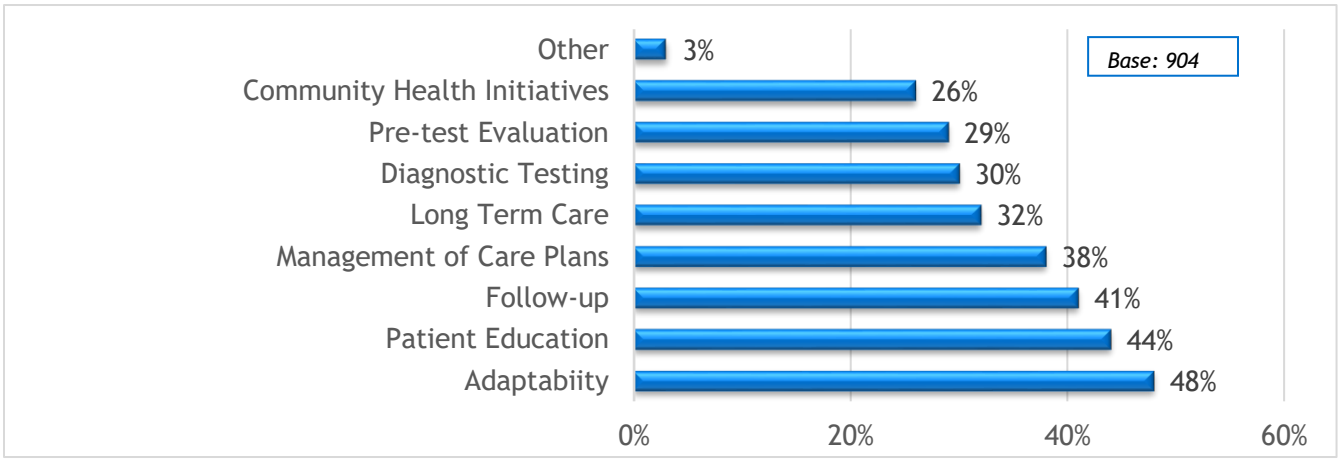
Q62. In what areas do you believe sleep technologists CURRENTLY have the greatest ability to expand their role in providing or supporting patient care? **(ALL RESPONDENTS)** Significantly more C-suite respondents (54%) and clinical coordinators (48%) cited management of care plans, and significantly fewer sleep health educators (32%) and sleep managers/directors (47%) cited diagnostic testing, than those in other groups.



Other - 33 open-end responses. Most common included: Not applicable, all of the above, navigation and end-to-end care. Some noted additional credentialing would be needed.

Q63. In what areas do you believe sleep technologists CURRENTLY have the greatest educational needs? **(ALL RESPONDENTS)**

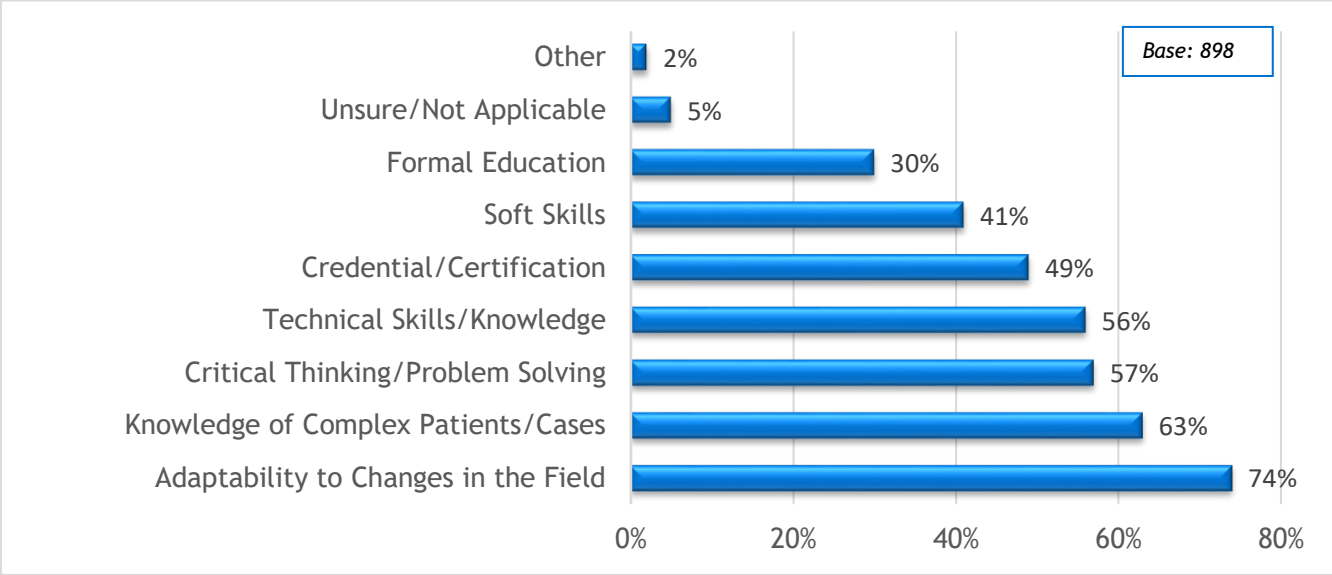
More sleep center managers (45%) also believed sleep technologists had the greatest educational needs in the area of management of care plans than did technologists (22%-32%).



Other - 26 open-end responses. Most common included: Unsure/don't know, and the need for sleep technologists to bill independently or obtain additional education (including in advanced procedures) to assume new responsibilities.

Survey Results

Q64. What do you think will be the critical competencies or skills a sleep technology practitioner will need to have to be successful in the NEXT 3-5 years: **(ALL RESPONDENTS)**



Other - 18 open-end responses. Most common included: All of the above, patient coaching/education and increased clinical skills.

Q65. Please elaborate on your answer above. 290 responses provided. 14 indicated not applicable. The remainder provided additional detail on each option from the previous question.