



COVID-19 Survey Study Descriptive Report

April 2021

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About NCCPA

NCCPA is the only certifying organization for PAs in the United States. Established as a not-for-profit organization in 1974, NCCPA is dedicated to providing certification programs that reflect standards for clinical knowledge, clinical reasoning and other medical skills and professional behaviors required upon entry into practice and throughout the careers of PAs. All U.S. states, the District of Columbia and the U.S. territories have decided to rely on NCCPA certification as one of the criteria for initial licensure or regulation of PAs. More than 170,000 PAs have been certified by NCCPA since 1975.

Executive Summary and Key Findings

NCCPA's overall purpose for conducting this national survey study was to assess and quantify PA experiences and perspectives on the impact of the coronavirus (COVID-19) pandemic and how PAs are coping and adapting to this challenging time. PAs were asked questions regarding changes to employment, practice settings, workload, morale, telemedicine use, future outlook, and challenges with earning Continuing Medical Education (CME) credits. Using descriptive statistics, phase one of this analysis aimed to answer five major research questions:

96% of PAs are clinically practicing

1) What is the impact of the pandemic on PA employment?

Among the most important findings was that 96.2% of PAs reported they were presently working in at least one clinical position when the survey was conducted, which was 8-9 months after the outbreak of the pandemic. Of PAs who reported working clinically at any time during the pandemic, 15.1% reported changing their practice setting. There were 12.2% of PA respondents who reported being furloughed either presently or at some point since the beginning of the pandemic, and 4.4% reported being laid off from their principal clinical position. Notably, 3.5% of PAs became infected and unable to work. Over 4% of PAs changed specialties due to COVID-19, and slightly fewer (2.8%) changed specialties for reasons unrelated to the pandemic. Of those who did not change specialties, 2.2% expect to do so in the next year due to the coronavirus. Many PAs switched their specialty to Emergency Medicine (9.9%), Critical Care Medicine (8.3%), and Hospital Medicine (7.8%) to be on the frontlines fighting the pandemic. PAs were divided on the difficulty of changing specialties, with 28.1% saying it was somewhat difficult, 22.0% neutral, and 24.2% somewhat easy. PAs were also split on intentions to return to their previous specialty: 34.3% plan on returning, 32.1% do not plan on returning, and 33.6% are undecided.

PAs are optimistic about continuing to provide care for their patients and the resilience and adaptability of the PA profession.

2) What is the impact of the coronavirus on workload, staffing, morale, and resilience?

Patient volume was impacted by the pandemic, with 45% of PAs reporting a decrease. However, PAs were split on overall workload changes, with 39% indicating it decreased, 32% stating it increased, and 28% reporting no change. Slightly over half of the PAs responding to the

survey (54%) reported no changes to the number of hours worked; however, about an equal proportion reported increases and decreases. The majority of PAs reported no changes to their confidence in their ability to practice in interprofessional teams (64%), satisfaction with their specialty (60%), and meaning derived from work as a PA (59%). More than half (53%) indicated an increased level of burnout, and 33% stated that their feeling of connectedness to patients had decreased. The sense of community PAs feel with other medical providers increased for 38% of PAs, and 35% felt an increase in their pride in being a PA. PAs have remained resilient in the face of the sustained health crisis. The vast majority agreed/agreed strongly that they are optimistic about their ability to continue providing care (89%), appreciate the resilience and adaptability of the PA profession (82%), and have been working well with their teams supporting each other during this difficult time (76%). Most reported no changes to the number of PAs (75%), physicians (80%), NPs (82%), nurses (66%), and allied health professionals (72%) on staff in their principal clinical position.

3) How has the pandemic influenced PA telemedicine use, and what are PAs' perspectives regarding this method of patient care?

A striking finding in the survey results was the substantial uptake of telemedicine, with approximately 12% of PAs reporting they care for 61% or more of patients using telemedicine. The percentage of PAs providing telemedicine increased from 14.7% to over 61%, resulting in a 315.7% growth. About a third (32.6%) of PAs indicated they were somewhat prepared for treating patients through telemedicine, followed by neither prepared nor unprepared (20.9%) and somewhat unprepared (19.8%). However, of the PAs who reported they are currently using telemedicine, most (77.2%) reported that their confidence with this method of patient care has increased since the start of the pandemic. A large majority of PAs (88.2%) believe that the use of telemedicine will continue to increase. The vast majority (87.0%) of PAs who currently use telemedicine in their practice indicated they would not have been able to continue treating patients without the use of telemedicine. Regarding telemedicine's impact on the quality of care, the results were more nuanced. Slightly less than half (46%) of PAs indicated that telemedicine decreased the quality of patient interaction; however, a similar percentage (47%) said that it had no impact on the quality of patient care. In a separate question, 45% noted that the use of telemedicine improved efficiency. The majority (60%) of PA respondents indicated that telemedicine did not impact the cost of care.

Over 61% of PAs care for patients using telemedicine.

93% of PAs agreed that an advantage of the PA profession is the flexibility to change positions to go where there is a need.

4) How do PAs feel about their profession adapting to the pandemic, and what is their future outlook?

Almost all (93%) PAs agreed that an advantage of the PA profession is the ability to change clinical positions to go where there is a need. Similarly, 88% indicated the profession's flexibility enables PAs to quickly adapt to changes in the job market. Nearly as many (87%) agreed

that the PA profession's generalist medical education and certification enables quickly changing clinical positions to go where there is a need, and 86% agreed the PA profession is resilient and will overcome the challenges faced during the pandemic. The majority (78%) of PA respondents reported feeling optimistic about the future of the profession. Approximately half (49%) disagreed that the pandemic will negatively impact PA careers; however, 27% were neutral, and 24% agreed. The highest percentage (57.3%) reported they expect hiring of PAs will stay the same, while 22.1% expect it will increase, and 20.6% expect it will decrease.

5) Did PAs experience any challenges obtaining CME credits during the pandemic?

When asked about their approach for earning CME credits, 51.2% of PA respondents indicated they had changed their strategies during the pandemic, and 48.8% stated they had not. In response to how challenging it had been to earn CME credits during the pandemic, 36.0% provided a neutral response, followed by 23.1% indicating it was somewhat difficult, 36.8% stating it was somewhat easy/very easy, and 4.2% noted it was very difficult.

The following report provides additional information on these five areas, as well as more detailed information on the survey results.

Introduction and Background

The coronavirus (COVID-19) pandemic has brought unprecedented and extraordinary demands on the healthcare workforce. In late May 2020, NCCPA initiated and implemented plans to conduct a national survey study of certified PAs to assess the pandemic's impact on the PA workforce and how PAs were coping and adapting during this challenging time. The hope was that the information garnered from the study would help policymakers and patients have a better understanding of the value of Certified PAs, especially during times of healthcare crises. The information provided from PAs completing the survey would also be used by NCCPA to continue monitoring how to best support PAs as they completed NCCPA's certification processes. The American Academy of Physician Assistants (AAPA) had completed a PA Pulse survey in April-May 2020, providing valuable data.¹ However, with the rapidly changing and evolving nature of the coronavirus pandemic and its impact, NCCPA determined that a subsequent survey conducted months into the pandemic would help provide a comprehensive review to better understand how PAs were coping and adapting.

During the months of June/July, NCCPA's research team conducted an extensive literature search related to the pandemic's impact on the healthcare workforce. Prior studies were used to generate a list of relevant themes. From these, survey questions or statements were developed, divided into five sections, and programmed into a survey platform for dissemination to Certified PAs. The categories included: 1) employment changes, 2) workload, staffing, morale, and resilience, 3) telemedicine use, 4) pandemic adaptations and future outlook, and 5) challenges with obtaining Continuing Medical Education (CME) credits. All items in the survey were iteratively reviewed and revised to determine the final version consisting of 30 questions. Similarly, the survey was thoroughly tested in the online platform to ensure that all of the survey logic worked as intended. Within the questionnaire's introduction, PAs were informed that all questions were completely voluntary, that their individual information would be treated confidentially and only reported in aggregate, and that the survey would take approximately 15 minutes to complete.

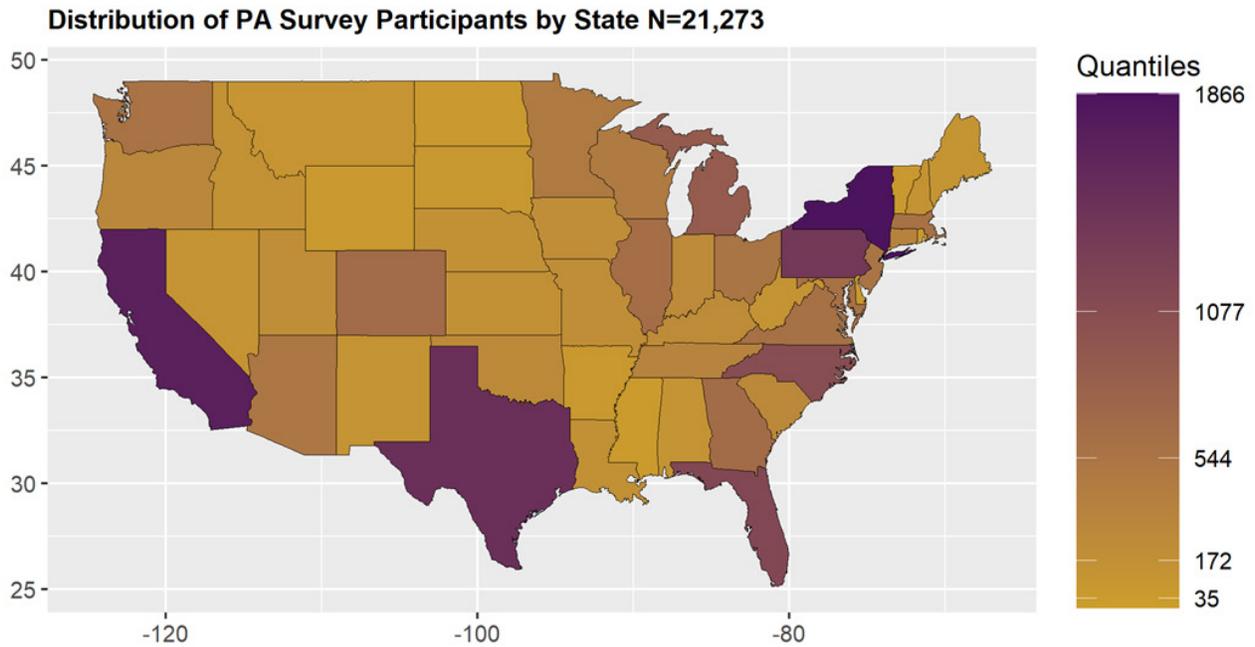
After obtaining IRB approval and a week prior to launch, NCCPA's monthly newsletter informed PAs that they would receive an email with a link to the survey on August 4th. An email with an invitation to the study and direct link to the survey was distributed to 138,891 Certified PAs who had not opted out of survey participation. During the month of August, a banner on NCCPA's website reminded PAs to check their email for a link to the survey. After launch, four reminder emails were sent on August 11th, 18th, 26th, and 31st. The survey remained open for a few more weeks to allow for all PAs interested in participating to submit their responses. It was officially closed on September 29th.

After closing the survey and removing duplicates, 21,273 PAs participated for an overall response rate of 15.3%. PA demographics, specialty, and practice setting variables from NCCPA's PA Professional Profile were matched to survey participants and merged with their survey responses. In the following section of this report, information is presented on the distribution of survey participants by state and comparisons of survey participants to non-participants. The first phase of data analysis provides a detailed descriptive summary of all responses to the survey by each section. A subsequent report (phase 2) will include bivariate and multivariate analyses by PA demographics and practice characteristics to explore potential differences in how PAs were impacted in the topics covered by the survey.

Distribution of PA Survey Participants by State

Figure.1 presents the distribution of PA survey participants (N=21,273) by state. PAs from across all 50 U.S. states and the District of Columbia participated in the survey. These results indicate that the distribution of survey participants is consistent with the overall Certified PA population and, thus, geographically representative. The top five states with the most participants are consistent with the top five states of Certified PAs and included New York (n=1,886), California (n=1,703), Pennsylvania (1,371), Texas (n=1490) and Florida (n=1,152).

Figure.1



PA Survey Participant Demographic Characteristics and Comparisons with Non-Participants

In **Table 1**, comparative information is provided on the demographic characteristics of all Certified PAs who were sent a link to participate in the survey, respondents, and non-respondents. To explore the possibility that PAs who did not participate in the survey were systematically different from respondents, demographic characteristics of age, gender, race, ethnicity, urban-rural setting, and U.S. region were first analyzed using Chi-Square tests for statistical significance testing. However, it should be noted that the large sample (N= 138,891) and resulting power to detect even small differences with Chi-Square tests can lead to an overstatement of significance.² Thus, Cramer's V Coefficient (V) was also used as an effect size estimate to assess the magnitude of the differences.³ This allowed researchers to determine if any statistically significant differences were driven by the large sample size or were related to meaningful or practical differences. The V statistic is a measure of association often used with Chi-Square tests of independence. Cramer's V greater than 0.1 can be interpreted as substantive, and researchers identified statistically significant differences between respondents and non-respondents on 4 of the 6 demographic characteristics. Survey participants compared to non-participants were slightly older (mean age 42.6 vs. 40.2; $p < 0.001$), had a higher percentage that were female (75.2% vs. 68.7%; $p < 0.001$) and from the West U.S. region (22.1% vs. 20.5%; $p < 0.001$) while having a lower percentage that were Asian (5.6% vs. 6.4%; $p < 0.001$). However, using Cramer's V 0.1 as a threshold, none of the PA demographic characteristics differed meaningfully between non-respondents and respondents.

Table 1. Demographic characteristics of all PAs who were provided with the survey and comparisons of survey non-participants vs. participants

	All PAs Sent Survey (138879)	Non-Participants (117606)	Participants (21273)	P- Value	Cramer's V
Age:					
Less than 30	22410 (16.1%)	20038(17.0%)	2372 (11.2%)		
30-39	54216 (39.0%)	46528 (39.6%)	7688 (36.1%)		
40-49	32674 (23.5%)	27132 (23.1%)	5542 (26.1%)	<0.001	0.079
50-59	18021 (23.5%)	14663 (12.5%)	3358 (15.8%)		
60+	11558 (8.3%)	9245 (7.9%)	2313 (10.9%)		
Mean/Median	40.5/38	40.2/37	42.6/40	<0.001	NA
Gender:					
Female	96725 (69.7%)	80732 (68.7%)	15993 (75.2%)	<0.001	0.051
Male	42142 (30.3%)	36864 (31.3%)	5278 (24.8%)		
Race:					
White	107255 (86.2%)	90201 (86.2%)	17054 (86.6%)		
Asian	7795 (6.3%)	6696 (6.4%)	1099 (5.6%)		
African American	4672 (3.8%)	3920 (3.7%)	752 (3.8%)	<0.001	0.079
Other	4658 (3.7%)	3878 (3.7%)	780 (4.0%)		
Ethnicity:					
Non-Hispanic/Latino	106646 (69.7%)	89264 (93.3%)	17382 (93.3%)	0.957	0.000
Hispanic/Latino	7612 (6.7%)	6369 (6.7%)	1243 (6.7%)		
Urban-Rural Setting:					
Urban	128303 (92.8%)	108673 (92.9%)	19630 (92.7%)		
Large Rural	5635 (4.1%)	4783 (4.1%)	7852 (4.0%)		
Small Rural	2400 (1.7%)	1999 (1.7%)	401 (1.9%)	<0.262	0.005
Isolated	1846 (1.3%)	1556 (1.3%)	290 (1.4%)		
Region:					
South	47331 (34.2%)	40020 (34.2%)	7311 (34.5%)		
Northeast	35278 (25.5%)	30184 (25.8%)	5094 (24.0%)		
West	28692 (20.7%)	24012 (20.5%)	4680 (22.1%)	<0.001	0.079
Midwest	27088 (19.6%)	22968 (19.6%)	4120 (19.4%)		

Note: Cramer's V is an effect size estimate: small to weak V=.1, Medium to moderate V=.3, and large or strong V=.5

Similarly, **Table 2** depicts practice characteristics (specialties and practice settings) of all PAs who were provided NCCPA’s survey, along with comparisons of participants and non-participants. Although there were statistically significant differences by specialty and practice setting, Cramer’s V was below the .1 threshold for both practice characteristics, thus indicating no substantive difference between participants and non-participants. This suggests that the sample was representative of the Certified PA population. Given the comparison results presented in Tables 1 and 2, no survey data weighting was implemented.

Table 2. Practice characteristics of all PAs sent survey and comparisons of survey non-participants vs. participants

	All PAs Sent Survey	Non-Participants	Participants	P- Value	Cramer’s V
Specialty (Top 15)					
Surgery-Subspecialties	20632 (18.7%)	17873 (19.4%)	2759 (14.8%)		
Family Med/General	20157 (18.2%)	16573 (18.0%)	3584 (19.3%)		
Other	18301 (16.5%)	14981 (16.3%)	3320 (17.8%)		
Emergency Medicine	14233 (12.9%)	11784 (12.8%)	2449 (13.2%)		
Internal Medicine - Subspecialties	10403 (9.4%)	8677 (9.4%)	1726 (9.3%)		
Internal Medicine – General	4910 (4.4%)	3999 (4.4%)	911 (4.9%)		
Dermatology	4501 (4.1%)	3757 (4.1%)	744 (4.0%)		
Hospital Medicine (Hospitalist)	4017 (3.6%)	3342 (3.6%)	675 (3.6%)	<0.001	0.051
Surgery - General	3329 (3.0%)	2806 (3.1%)	523 (2.8%)		
Pediatric - General	2066 (1.9%)	1606 (1.8%)	460 (2.5%)		
Critical Care Medicine	1861 (1.7%)	1534 (1.7%)	327 (1.8%)		
Psychiatry	1844 (1.7%)	1518 (1.7%)	326 (1.8%)		
Pain Medicine	1486 (1.3%)	1246 (1.4%)	240 (1.3%)		
Occupational Medicine	1482 (1.3%)	1190 (1.3%)	292 (1.6%)		
Pediatrics- Subspecialties	1398 (1.3%)	1117 (1.2%)	281 (1.5%)		

Table 2. Practice characteristics of all PAs sent survey and comparisons of survey non-participants vs. participants (cont.)

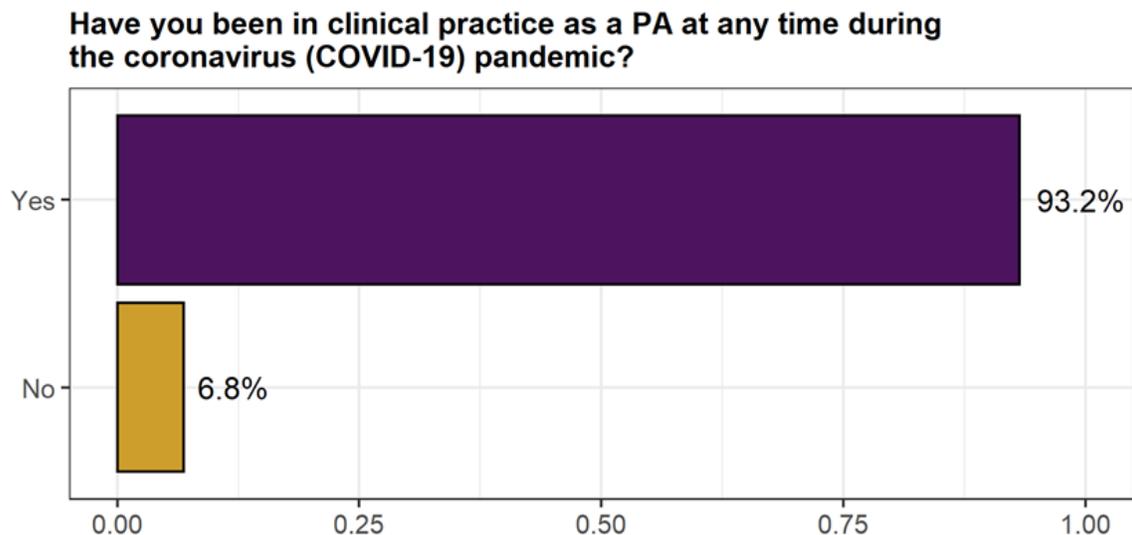
	All PAs Sent Survey	Non-Participants	Participants	P- Value	Cramer's V
Practice Setting (Top 10)					
Hospital	46062 (41.7%)	38688 (42.1%)	7374 (39.7%)		
Office-Based private practice	41875 (37.9%)	34701 (37.8%)	7174 (38.6%)		
Federal government	5561 (5.0%)	4782 (5.2%)	779 (4.2%)	<0.001	0.036
Urgent Care	5297 (4.8%)	4230 (4.6%)	1067 (5.7%)		
Other	3688 (3.3%)	2995 (3.3%)	693 (3.7%)		
Community health center	3262 (3.0%)	2647 (2.9%)	615 (3.3%)		
Rural health clinic	1946 (1.8%)	1593 (1.7%)	353 (1.9%)		
Public or community health clinic	975 (0.9%)	799 (0.9%)	176 (1.0%)		
School/college-based center/ clinic	890 (0.8%)	688 (0.8%)	202 (1.1%)		
Occupational health setting	848 (0.8%)	690 (0.8%)	158 (0.9%)		

Note: Cramer's V is an effect size estimate: small to weak V=.1, Medium to moderate V=.3, and large or strong V=.5

Clinical Employment Changes

The first question of the survey asked participants to indicate if they had been in clinical practice as a PA at any time during the pandemic. The response to this question determined subsequent survey questions that would be administered to the PA survey participants. PAs answering in the affirmative were further asked about their experiences during the coronavirus pandemic and its impact on their employment and practice. Conversely, PAs who reported not practicing clinically during this time skipped these sections of the survey. **Figure 2** highlights that the vast majority of survey participants (93.2%) indicated they were in clinical practice during the pandemic.

Figure. 2



PAs who reported they had been in clinical practice during the pandemic (n=19,675) were asked if they had experienced any employment changes due to the coronavirus. Eight potential employment changes and an “other” option were provided in this “check all that apply” item. **Table 3** shows that the highest percentage of respondents indicated other (19.0%), followed by changing practice setting (15.1%), being furloughed (12.2%), and laid off from principal clinical position (4.4%). Of note, 3.5% reported becoming infected with the virus and unable to work. The findings for PAs being laid off and being infected with the virus were consistent with the AAPA’s survey conducted in April-May, 2020, which showed that 3.7% of PAs were laid off and 3.6% infected at that time.¹ Results slightly differ between the two studies for the percentage of PAs who were furloughed (12.2% from NCCPA’s study vs. 22.1% from the AAPAs study) and changed practice setting (15.1% vs. 9.9%, respectively).¹ However, the impact of the coronavirus and approaches to contain it have been rapidly evolving. Both surveys were cross-sectional, capturing snapshots in different time frames on how PAs were impacted by the pandemic. This may explain some of the differences in findings between the two reports.

Survey respondents who selected ‘other’ were asked to write in an open-ended comment to expand on this response. Many PAs used this section to describe modifications to their work hours and changing specialties. Further in the survey, these topics were addressed in more depth through closed-ended questions, which are presented in Workload, Staffing, Morale, and Resilience section of this report. The qualitative data captured in all open-ended questions will be analyzed and presented thematically in more detail in a follow-up report.

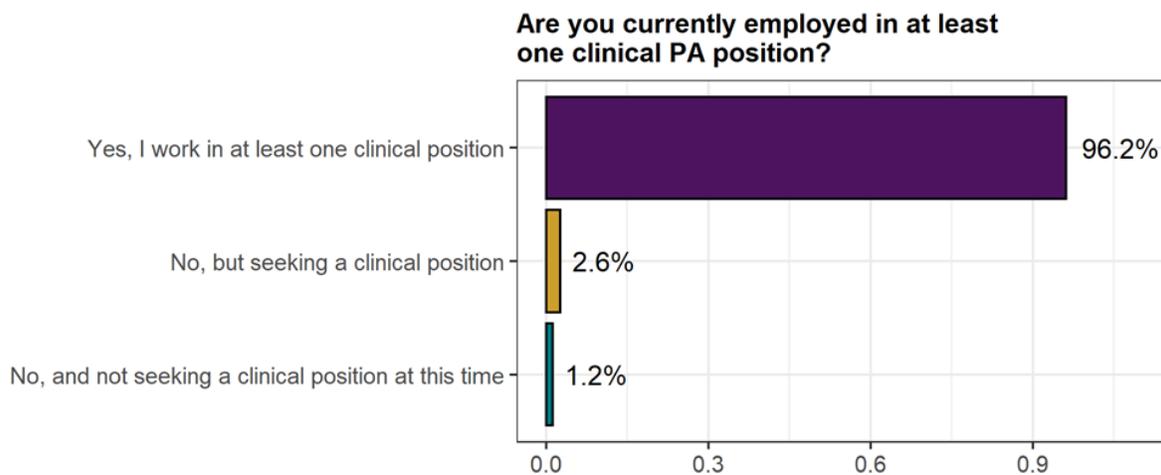
Table 3. Employment changes due to the coronavirus (COVID-19) pandemic

Changed practice setting (e.g., from office-based private practice to hospital)	2968 (15.1%)
Was or currently being furloughed in principal clinical position	2403 (12.2%)
Was laid off from principal clinical position	857 (4.4%)
Became infected with COVID-19 and unable to work	678 (3.5%)
Was or currently being furloughed in secondary clinical position	476 (2.4%)
Decided not to work clinically due to the high risk of being infected or infecting family with COVID-19	450 (2.3%)
Was laid off from secondary clinical position	302 (1.5%)
Needed to stop working to care for a family member who was infected with COVID-19	147 (0.8%)
Other	3739 (19.0%)

Note: PA survey respondents could select multiple responses; thus, percentages do not add to 100%.

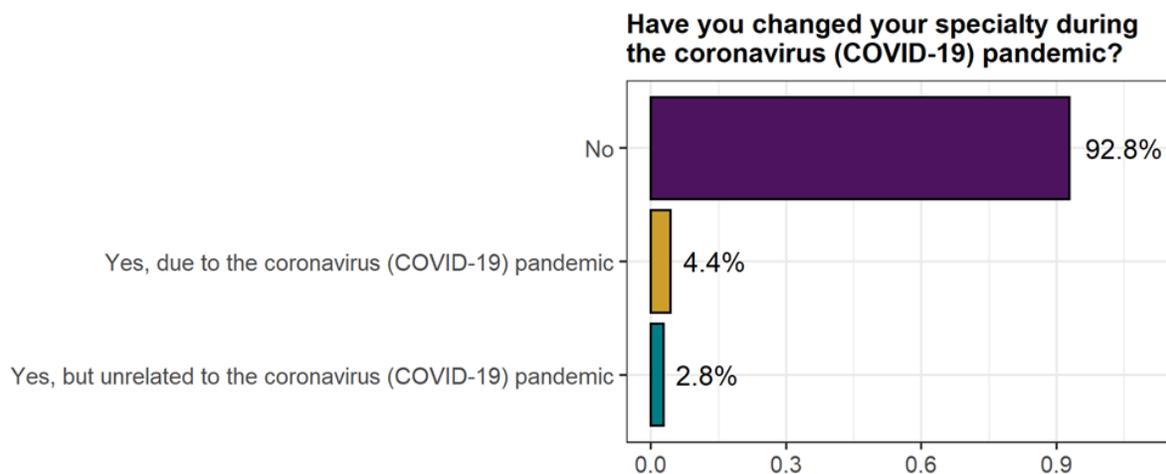
After asking about employment changes, PAs were queried to determine if they were currently employed in at least one clinical position. This question helps to better understand the longer-term effects the pandemic has had on clinical PA employment since data were collected at the end of the summer, approximately 8-9 months after the virus outbreak in the U.S. Most (96.2%) indicated they were currently in clinical practice, while 2.6% were seeking a clinical position, and 1.2% were not looking for one at this time (**Figure 3**). These results, viewed in the context of the previous question on specific types of employment changes due to the coronavirus, point to the adaptability of the PA profession as the vast majority reported working in at least one clinical position 8-9 months after the pandemic started to unfold.

Figure. 3



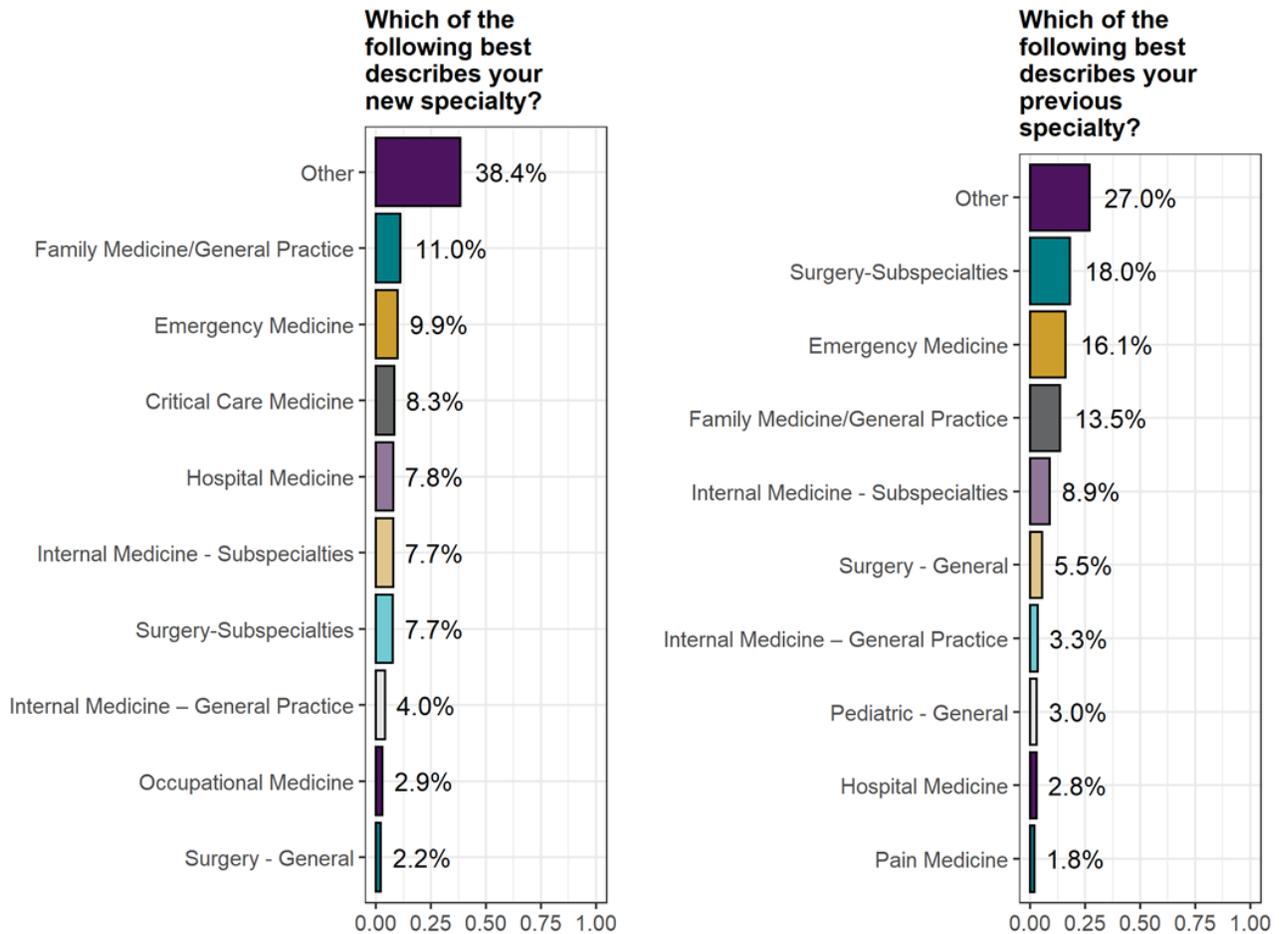
Another area explored in the survey was whether PAs had changed their specialty. **Figure 4** depicts that 92.8% did not report changing their specialty. However, 7.2% of PAs did start practicing in a new specialty, with 4.4% changing their specialty due to the pandemic, and 2.8% indicating their reason being unrelated to the coronavirus. These results are comparable to that of the AAPA survey, which reported that 5.9% changed their specialty.¹

Figure. 4



PAs who reported changing specialties, whether due to COVID-19 or unrelated, were further asked to indicate their new specialty (**Figure 5**). The new specialty item in the survey presented 70 response options (69 specific practice areas and an “other” category) from which PAs could select their new specialty. For ease of interpretation, the 12 internal medicine subspecialties were collapsed into one category; similar categorization was conducted for the 18 pediatric subspecialties and the 13 surgery subspecialties, resulting in 30 total condensed categories. For this phase 1 report, the specialties were truncated to the largest ten, which included the nine most frequent specialties PA transitioned to and a grouping of 21 other specialties that did not reach the 9 most frequently selected list. The highest percent of PAs (38.4%) changed their specialty to “other”, followed by Family/Medicine/General Practice (11.0%). Of note, 26.0% changed to hospital-based specialties, including Emergency Medicine (9.9%), Critical Care Medicine (8.3%), and Hospital Medicine (7.8%), to be on the frontlines fighting the coronavirus.

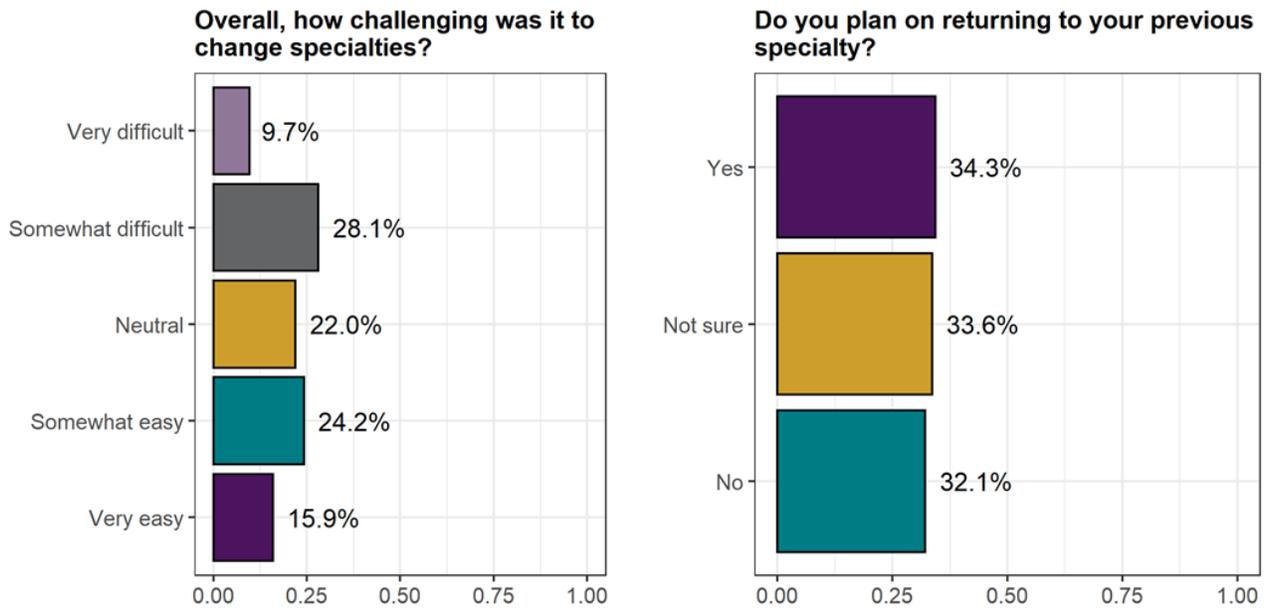
Figure. 5 (left) and 6 (right)



The ten most frequently selected specialties that PAs transitioned from are summarized in **Figure 6**. Over a quarter (27.0%) were in the “other” category while 18.0% changed from Surgery-Subspecialties, 16.1% from Emergency Medicine, and 13.5% from Family Medicine/General Practice. The finding that 18.0% of PAs moved from Surgery-Subspecialties may be due to restrictions put in place on elective surgeries during pandemic surges to ensure sufficient protective equipment and ventilators were available for directly containing, managing, and treating infected patients.

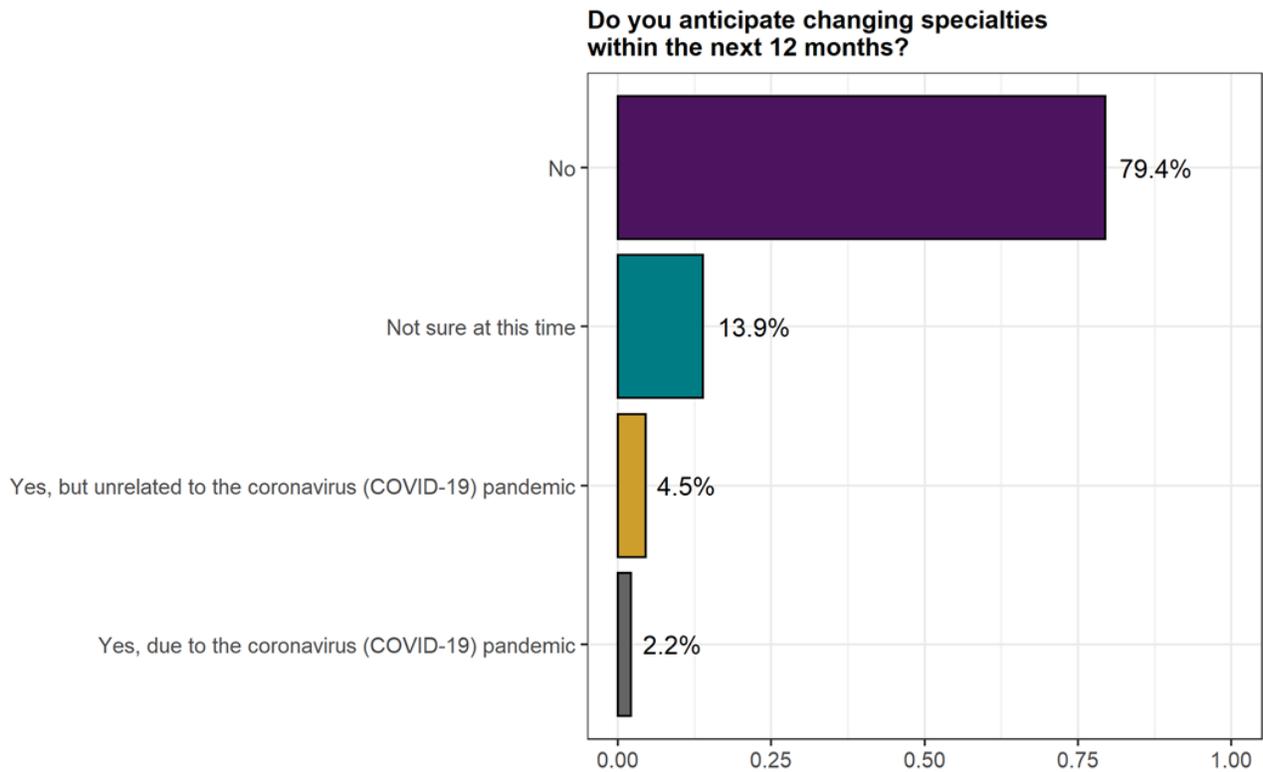
When analyzing the level of challenge associated with changing specialties, PAs were split between indicating somewhat difficult (28.1%), somewhat easy (24.2%), and neutral (22.0%), as shown in **Figure 7**. About 16% responded that it was easy, and 9.7% reported it to be very difficult. PAs who changed their specialty were fairly equally divided about whether they intend to return to their previous specialty, with approximately one third responding that they would, one third were not sure, and one third indicated they would not. (**Figure 8**). Future phase two analysis will provide more insight regarding potential differences in challenges experienced and intentions to return to the previous specialty by PA demographics and practice characteristics.

Figure. 7 (left) and 8 (right)



PAs who were currently working in clinical positions and had not changed their specialty during the pandemic were asked if they anticipated making a change of specialty in the next year (**Figure 9**). Almost 80% indicated they do not intend to change specialties, 13.9% were not sure at this point in time, 4.5% said they would but not due to the coronavirus, and 2.2% said they anticipated changing specialties due to the pandemic.

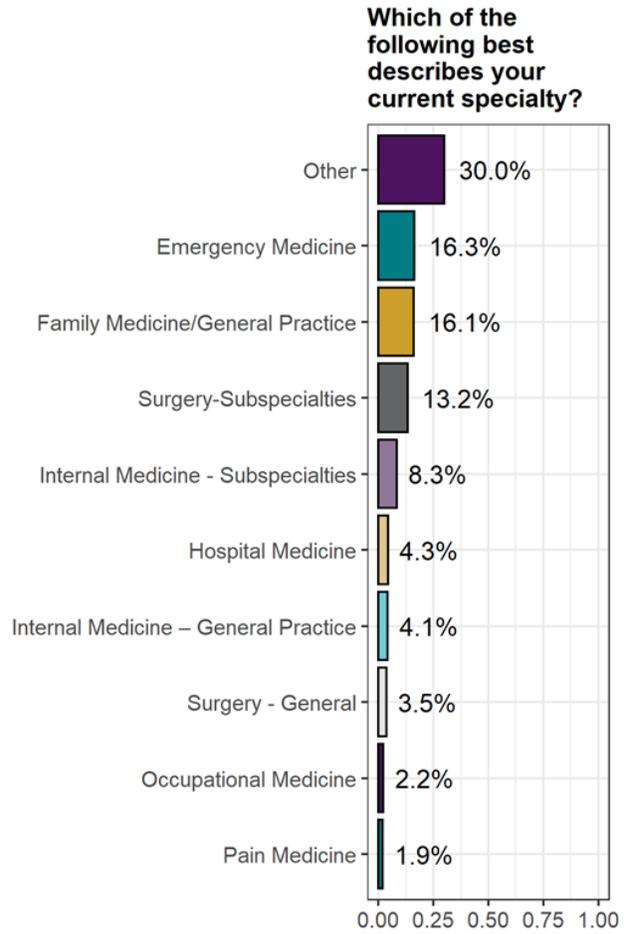
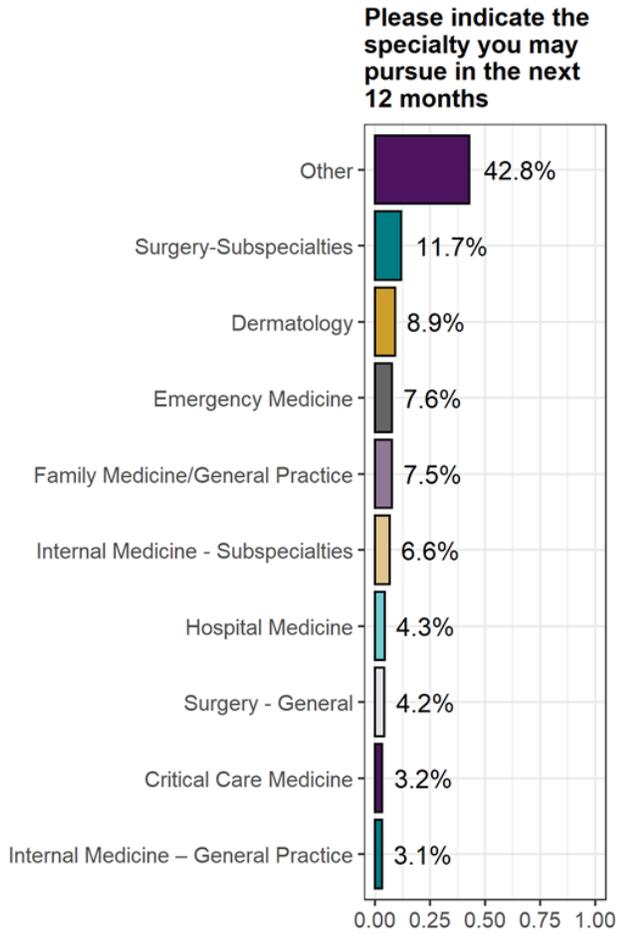
Figure. 9



When asked about their intentions of which specialty they anticipated changing to in the next 12 months, 42.8% selected “other,” followed by Surgery-Subspecialties (11.7%), and Dermatology (8.9%; **Figure 10**). These findings differ from what was reported by PAs who have already changed their specialty (**Figures 5 and 6**). For example, it is interesting that 18.0% transitioned from Surgery-Subspecialties while 11.7% of PAs who have not yet changed specialties intend to move into Surgery-Subspecialties.

Figure 11. illustrates the ten most frequently selected current specialties of PAs who may pursue a new specialty in the next year. Most (30.0%) are in “other” specialties, 16.3% are in Emergency Medicine, 16.1% are in Family Medicine/General Practice, and 13.2% are in Surgery-Subspecialties.

Figure. 10 (left) and 11 (right)



Workload, Staffing, Morale, and Resilience

The survey also included questions to gather information on potential changes in overall workload, patient volume, hours worked, and composition of staff currently employed at the principal clinical position compared to before the outbreak of the pandemic. **Figure 12** shows that almost half (45%) of PA respondents reported a decrease in patient volume. PAs were split on overall workload, with 39% indicating it decreased, 32% stating it increased, and 28% reporting no change. The composition of healthcare providers currently employed at PAs' principal position remained fairly stable with 75% reporting no changes to number of PAs and other professions ranging from 82% no change for NPs to 66% no change in the number of nurses. Over half (54%) of the PA respondents reported no change to the number of hours worked per week; however, those who reported an increase or decrease in the number of hours worked per week were almost equally divided, with 22% and 23% respectively. This varied from the AAPA survey report that indicated 58.7% had reduced work hours.¹ Exploring potential differences by specialties and practice settings in the phase 2 analysis is expected to provide additional insight into these findings.

Figure. 12

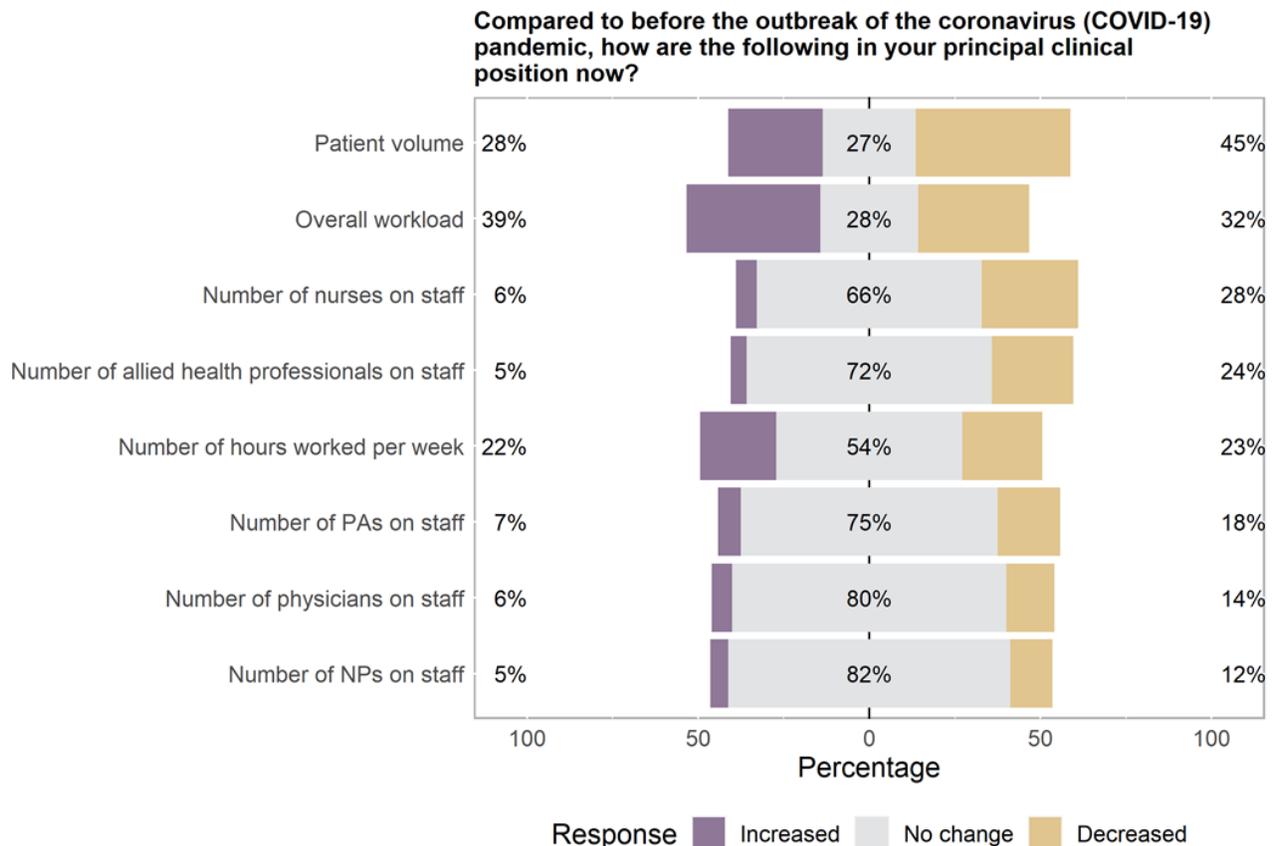
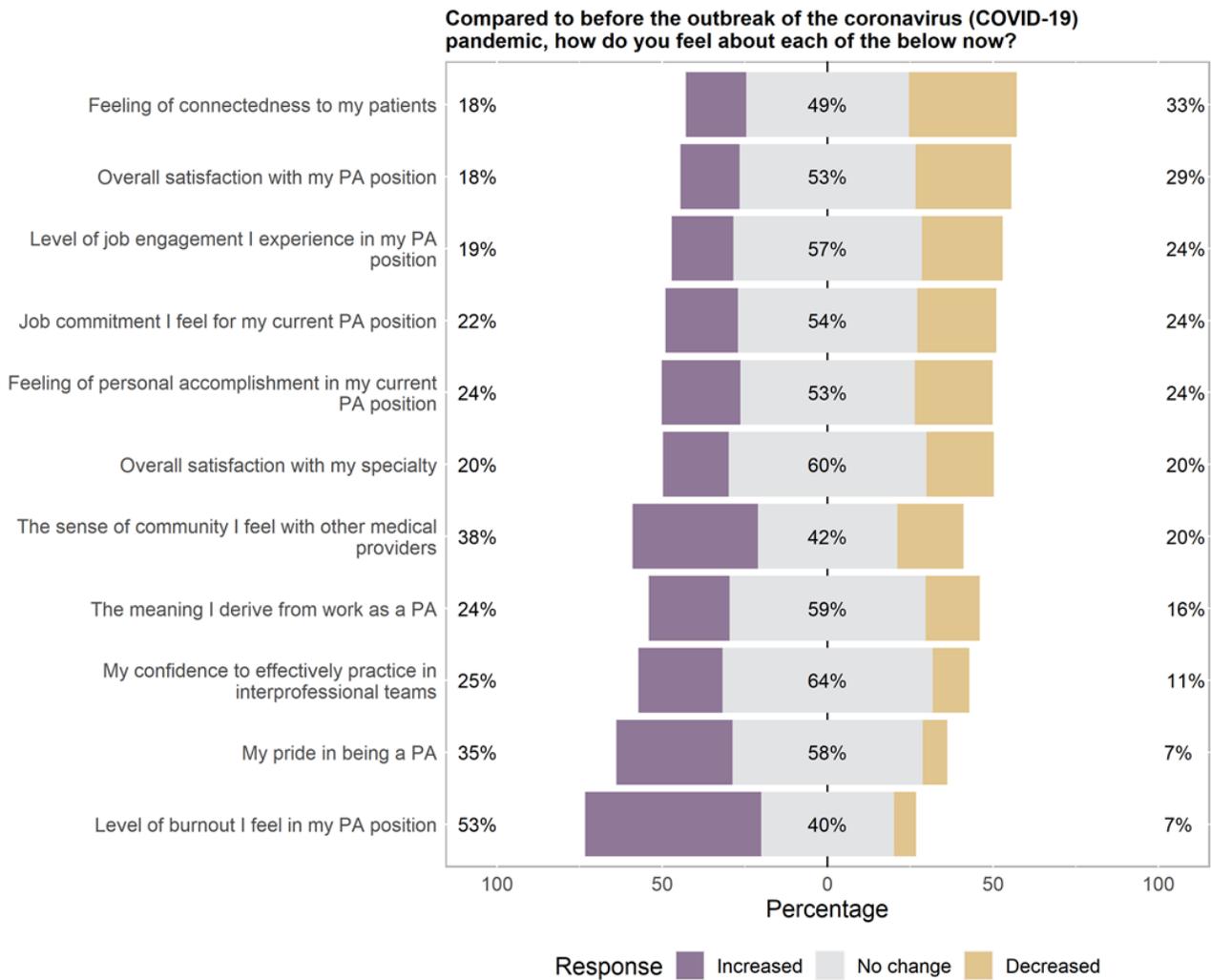


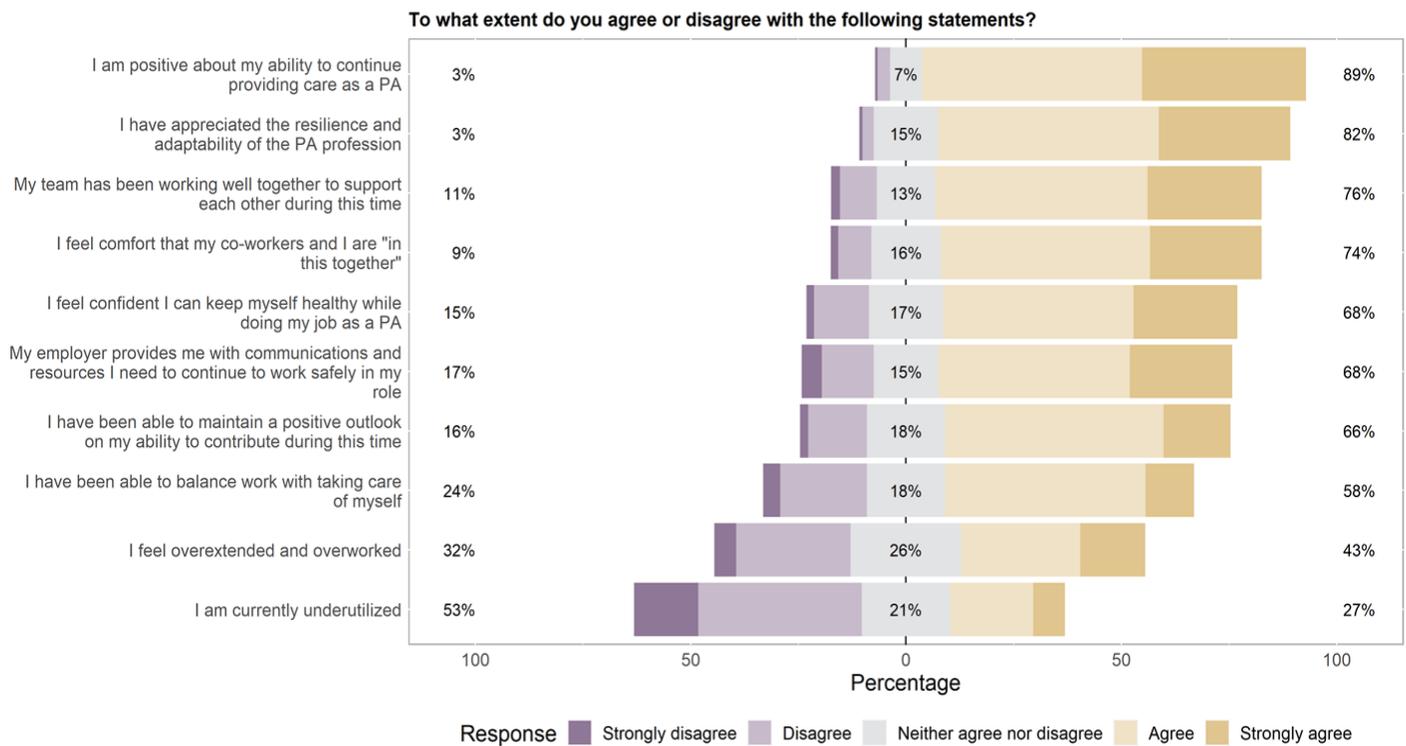
Figure 13 depicts changes in PA morale during the coronavirus pandemic. The majority of PAs reported no changes to the factors assessed, including confidence in their ability to practice in interprofessional teams (64%), satisfaction with their specialty (60%), and meaning derived from work as a PA (59%). However, more than half (53%) indicated an increased level of burnout. In the AAPA, study 52.5% of PAs selected “Occasionally I am under stress, and I don’t always have as much energy as I once did, but I don’t feel burned out”.¹ This contrasting finding between the two surveys suggests the level of burnout has increased for PAs since April/May. Further, 33% stated that their feeling of connectedness to patients had decreased. However, 38% of PA respondents indicated that the sense of community they feel with other medical providers had increased, and 35% felt their pride in being a PA also increased.

Figure. 13



In addition to potential changes due to the pandemic, the survey included questions to help gauge the resilience of PAs during these unprecedented times. As depicted in **Figure 14**, the vast majority of PAs agreed/strongly agreed that they are optimistic about their ability to continue providing care (89%), appreciate the resilience and adaptability of the PA profession (82%), and have been working well with their teams supporting each other during this difficult time (76%). Based on the results presented in this figure, it is clear that PAs have remained resilient in the face of the sustained health crisis. A concerning finding is that 43% of PA respondents feel overextended and overworked, while 27% feel underutilized, suggesting there may be differences between PAs practicing in different specialties/ practice settings or regions of the U.S. differentially impacted by the surging COVID-19 pandemic. It is anticipated that the phase 2 continued analysis will provide additional insights into these data.

Figure. 14

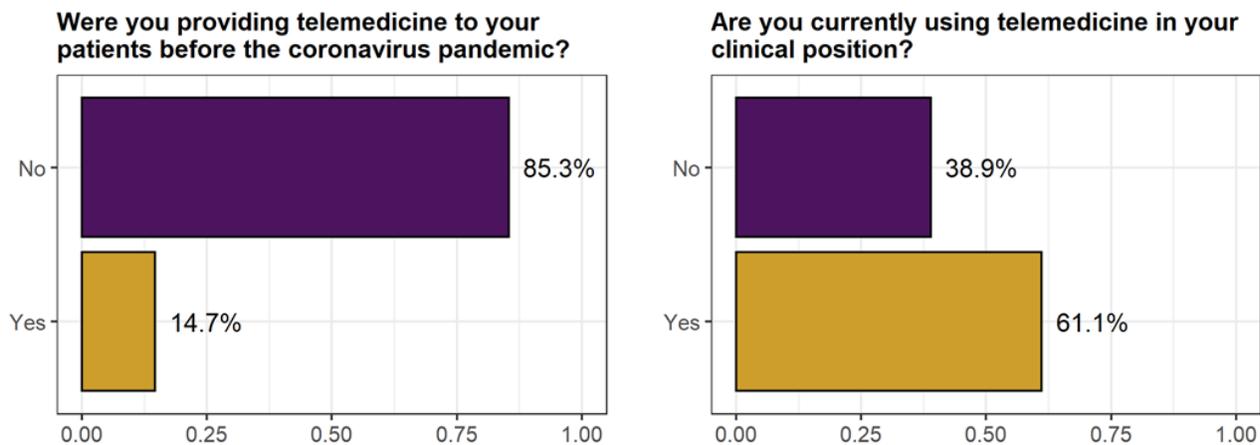


Telemedicine Uptake, Preparedness, Confidence, Future Use and Impact on Practice

Eight survey questions related to telemedicine to gather information on participation before and during the pandemic, how prepared PAs were to use this method of care, change in confidence level in using telemedicine, proportion of patients being seen via telemedicine, perspective on future use, impact of telemedicine on treating patients who may otherwise not be treated, and impact of telemedicine on different practice components.

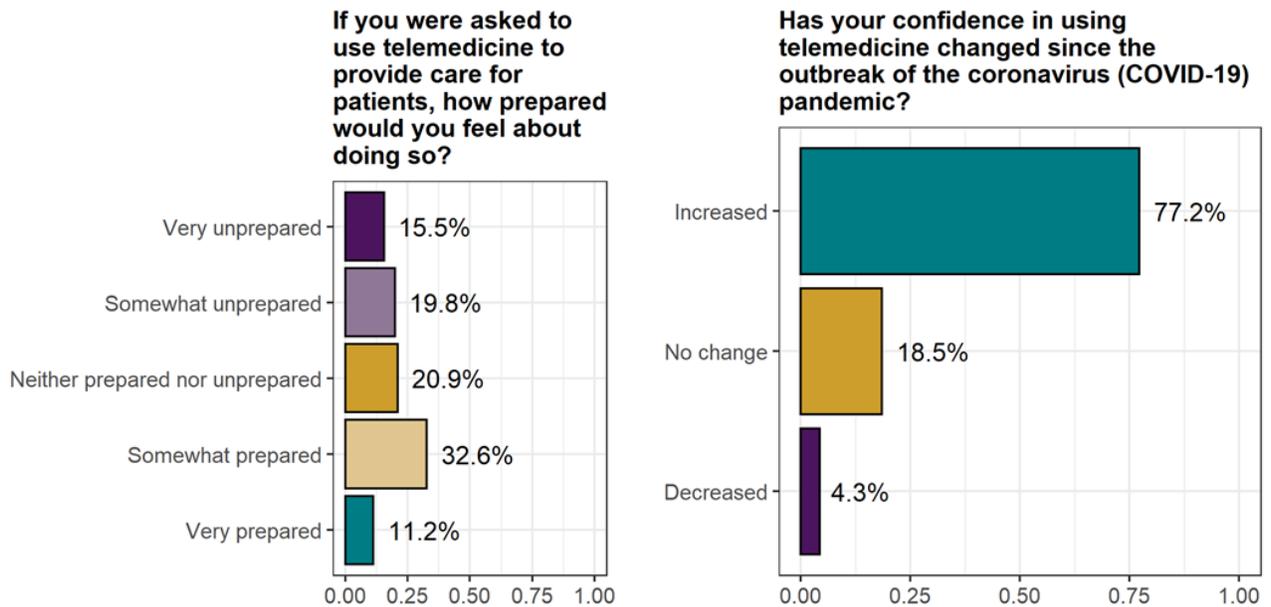
Figures 15 and 16 depict telemedicine use before and during the pandemic. As shown in the two figures, a striking finding in this study was a substantial uptake of telemedicine; the percentage of PAs providing telemedicine increased from 14.7% to over 61%, which equates to a 315.7% growth. The coronavirus has spurred novel ways of reaching and treating patients, with results showing that the majority of PAs now rely on this technology to provide care for their patients.

Figure. 15 (left) and 16 (right)



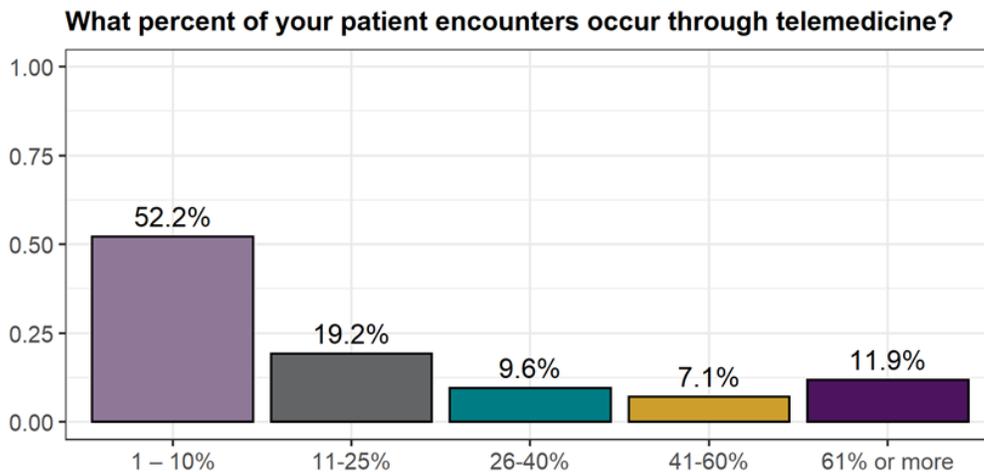
PAs who were not currently using telemedicine in their practice were queried on how prepared they would feel if asked to use telemedicine to care for their patients (**Figure 17**). About a third (32.6%) indicated they were somewhat prepared, followed by neither prepared nor unprepared (20.9%), and somewhat unprepared (19.8%). However, of the PAs currently using telemedicine, most (77.2%) reported that their confidence with this technology had increased since the outbreak of the coronavirus pandemic (**Figure 18**). This finding suggests that once PAs adopt telemedicine in their practice, they quickly become confident in using it to provide care for patients.

Figure. 17 (left) and 18 (right)



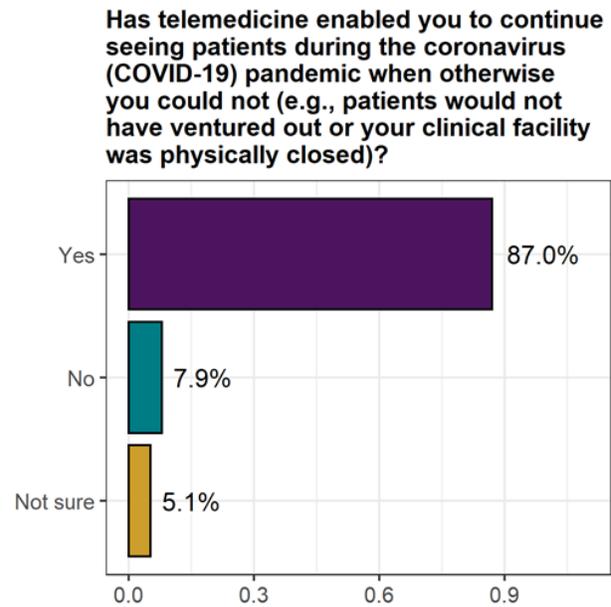
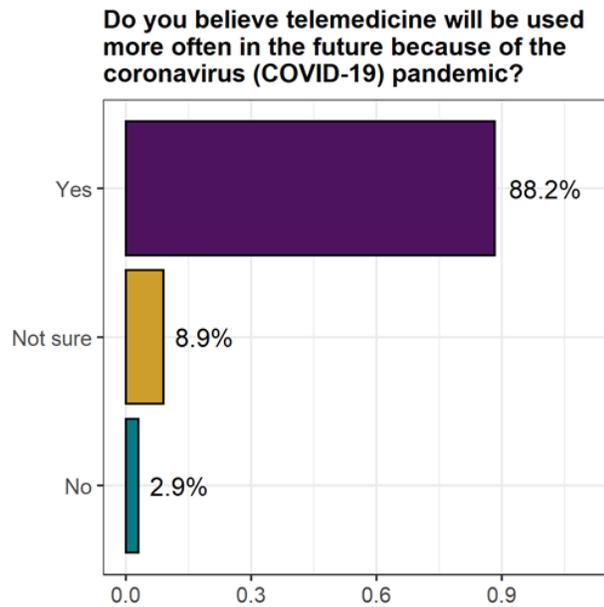
A slight majority (52.2%) of PAs indicated that 1 to 10% of their patient encounters occur via telemedicine, and 19.2% of PAs stated that 11-25% of their patient encounters are through telemedicine (**Figure 19**). Of note, approximately 12% of PAs reported they see 61% or more of their patients through telemedicine. An exploration of potential differences by specialties will be included in the phase 2 analysis.

Figure. 19



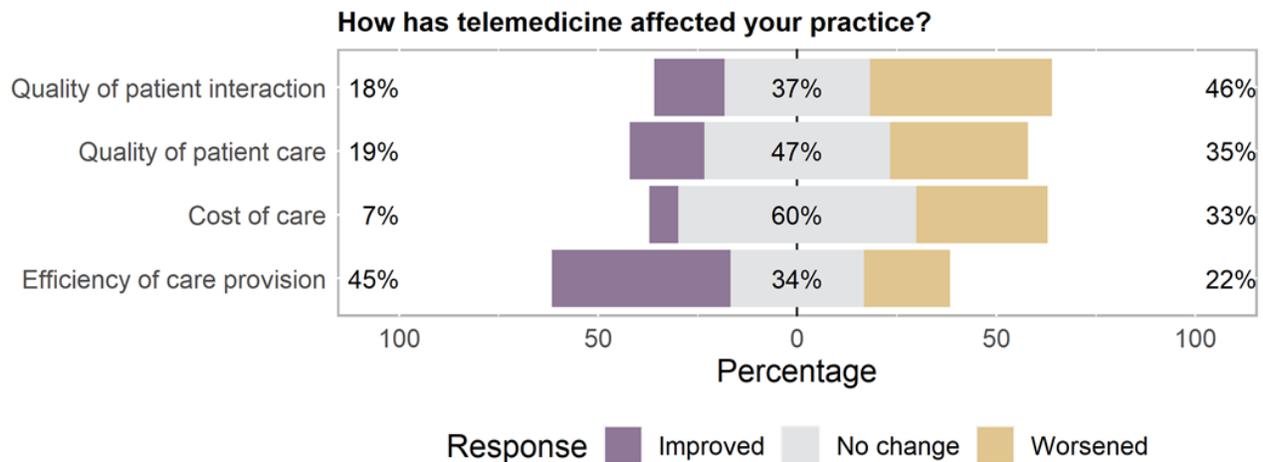
All survey participants were asked if they believed that telemedicine will be used more often in the future because of the coronavirus pandemic (**Figure 20**). A very large majority (88.2%) believe that it will be utilized more frequently in the future, and only 2.9% indicated that it will not, while 8.9% were not sure. When PAs who reported they currently use telemedicine in their practice were asked if telemedicine enabled them to continue seeing patients they would not otherwise have seen during the COVID-19 pandemic, the vast majority (87.0%) responded affirmatively, while 7.9% said it did not, and 5.1% were not sure (**Figure 21**).

Figure. 20 (left) and 21 (right)



The study also included questions to garner information on telemedicine’s impact on PAs’ clinical practice (**Figure 22**). The results were more nuanced as slightly less than half (46%) of the PAs responding to the survey indicated that telemedicine worsened the quality of patient interaction; however, a similar percentage (47%) said that it had no impact on the quality of patient care. In a related question, 45% of PAs believed telemedicine improved efficiency of care provision. The majority (60%) of PAs indicated that telemedicine did not impact the cost of care. These results, viewed in the context of the other telemedicine responses in this section, suggest that this technology’s rapid uptake may have a differential impact on disparate areas of clinical PA practice.

Figure. 22



Perspectives on PA Profession, Future Outlook, and Hiring

Figure 23 provides a detailed summary of PAs’ perspectives on the PA profession and future outlook. The vast majority (93%) of PAs agreed that the ability to change clinical positions to go where there is a need is an advantage of the PA profession, and 88% believed the flexibility of the profession enables PAs to quickly adapt to changes in the job market. Nearly as many (87%) agreed that the PA profession’s generalist medical education and certification enables quickly changing clinical positions to go where there is a need, and 86% believed the PA profession is resilient and will overcome the challenges faced during the pandemic. The majority (78%) reported feeling positive/optimistic about the future of the PA profession. Approximately half (49%) disagreed that the coronavirus pandemic will have a negative impact on PA careers; however, 27% were neutral and 24% agreed.

Figure. 23

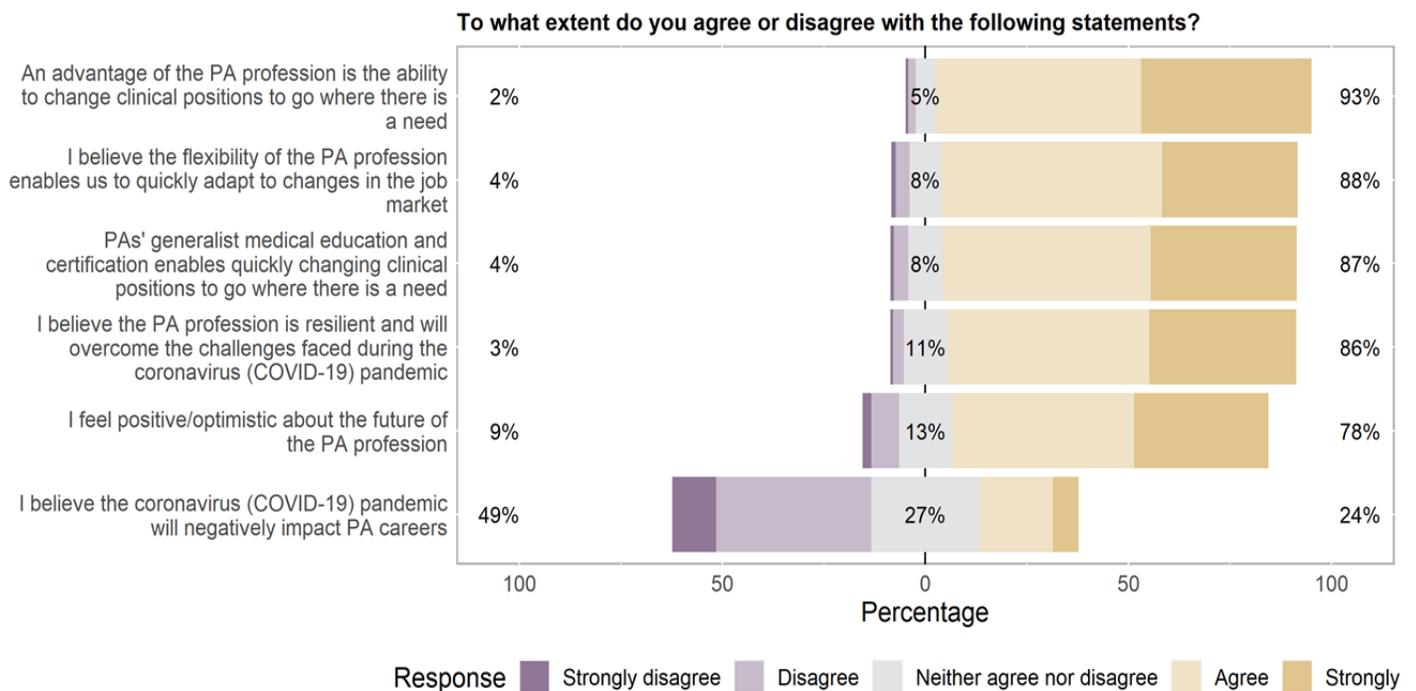
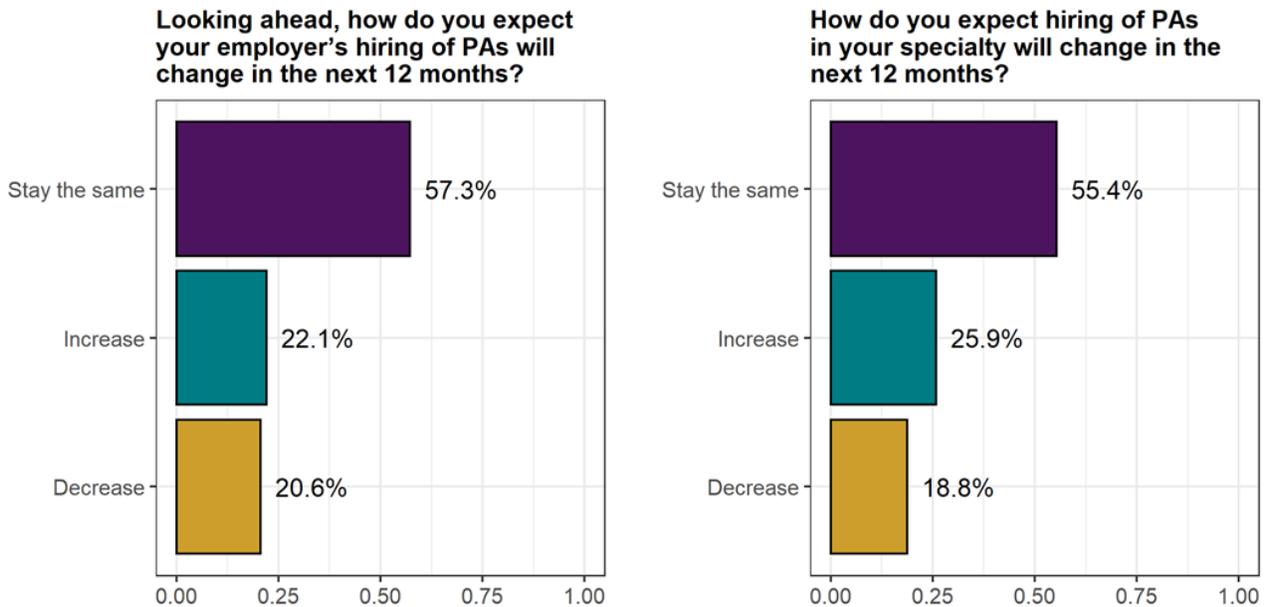


Figure 24 depicts how survey respondents expect their employer’s hiring of PAs to change in the next year. The highest percentage (57.3%) reported that hiring of PAs will stay the same, while 22.1% said it will increase and 20.6% expected it will decrease. **Figure 25** illustrates similar percentages when the question specifically asked the PA’s opinion on how hiring of PAs in their specialty will change in the next 12 months. The phase 2 analysis will examine whether PAs in different specialties responded differently to this question.

Figure. 24 (left) and 25 (right)



Experiences Obtaining CME Credits during COVID-19 Pandemic

The last section of the survey assessed the experiences PA have had with obtaining CME credits, including how they obtained CME credits before the outbreak of the coronavirus pandemic, if they had to change the way they obtained their CME, and how challenging it was to do so.

Table 4 shows that almost 62% of PAs obtained their CME credits online before the pandemic, followed by professional conferences (51.7%), and journal reading (30.1%).

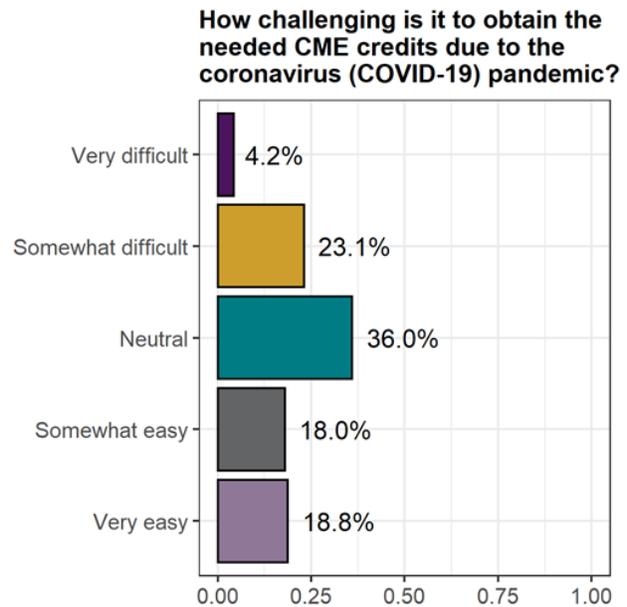
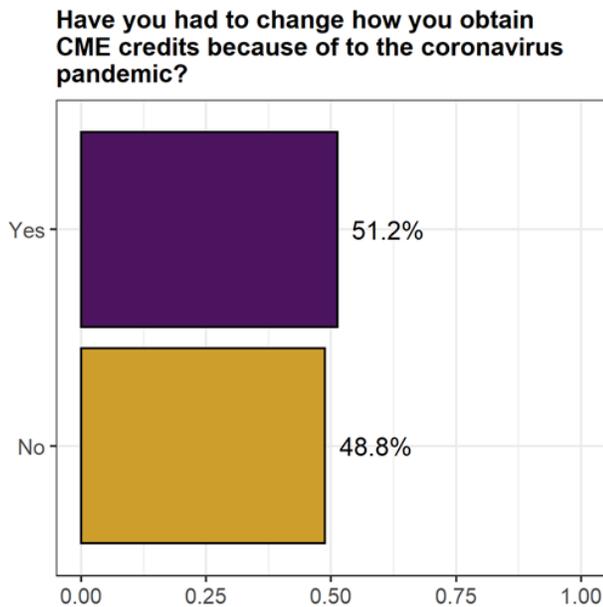
Table 2. Practice characteristics of all PAs sent survey and comparisons of survey non-participants vs. participants

Online (e.g., webinar, distance learning, UpToDate)	13162 (61.9%)
Professional conferences	10992 (51.7%)
Journal reading	6395 (30.1%)
Hospital-based seminars	2535 (11.9%)
Educational institution	1052 (5.0%)
Other	524 (2.5%)

Note: PA survey respondents could select multiple responses; thus, percentages do not add to 100%.

When asked if they had to change the way they obtained CME credits, PAs were split with 51.2% indicating they did have to make changes and 48.8% stating they did not (**Figure 26**). **Figure 27** illustrates PAs' rating of how challenging it was to obtain the needed CME credits during the pandemic. The highest percentage indicated it was neutral (36.0%), followed by somewhat difficult (23.1%). Over a third (36.8%) reported it was somewhat easy/very easy, and few (4.2%) noted that it was very difficult.

Figure. 26 (left) and 27 (right)



References

1. AAPA. *COVID-19 and the PA Workforce.*; 2020. Accessed November 1, 2020. <https://www.aapa.org/download/65014/>
2. Wasserstein RL, Lazar NA. The ASA statement on p-values: context, process, and purpose. Published online 2016.
3. Ferguson CJ. An effect size primer: A guide for clinicians and researchers. Published online 2016.

Citation and Acknowledgements

Uses of data from this report must be cited as follows:

National Commission on Certification of Physician Assistants, Inc. (2021, February). **COVID-19 Survey Study Descriptive Report**. Retrieved Date, from www.nccpa.net/research

This study is exempt from IRB review pursuant to the terms of the U.S. Department of Health and Human Service's Policy for Protection of Human Research Subjects at 45 C.F.R. 46.101(b).

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