



NERVES Summary of Survey Results

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Overview

- Survey questionnaires in Excel format were distributed electronically to the entire membership (182 practices) and additional non-member practices in June 2022.
- Participants and responses are confidential (i.e., only KSM has access to the specific data).
- KSM now screens for certain “critical data questions.” If those questions are not answered, the survey is either rejected or additional information is requested.
- In 2022, there was a second survey (Society of NeuroInterventional Surgery, SNIS) running at the same time as NERVES.
- If you have suggestions regarding additional information you would like to see included in the survey or information that is currently in the survey you would like to see excluded, please email NERVES@ksmcpa.com.

Demographics – Practice

	2018	2019	2020	2021	2022
Distributed (NERVES Members)	241	180	182	182	182
Responses (NERVES Members)	70	75	66	52	29
Response Rate (NERVES Members)	29%	42%	34%	29%	16%
Neurosurgeons	738	813	642	632	369
Non-Physician Providers	662	1,037	939	765	516
Practices Reporting NPP	83	88	71	51	29
MGMA: Reporting Neurosurgeons ⁽¹⁾	555	580	656	799	817
Sullivan Cotter: Reporting Neurosurgeons ⁽²⁾	Unknown	977	1,012 ⁽⁴⁾	Unknown	1,061
AMGA: Reporting Neurosurgeons ⁽³⁾	553	618	618	739	841

(1) Medical Group Management Association's Annual Physician Compensation and Production Survey: 13.0% physician-owned, 78.6% hospital-owned, 8.5% other majority owner.

(2) Sullivan Cotter's Annual Physician Compensation and Productivity Survey Report

(3) American Medical Group Association's Annual Medical Group Compensation and Productivity Survey

(4) Sullivan Cotter's 2020 Report noted the following academic affiliation statistics: 62% of all reporting practices are affiliated with a minor or major teaching program. The 2020 Report also noted only 25% of practices are majority physician-owned.

Survey Comparison

- NERVES is currently the only survey data available that isolates and analyzes Covid-19 related economic data.
- Large disparities continue in the ownership composition of various surveys, making inter-survey comparison increasingly difficult.

Respondent Mix	NERVES	MGMA	SullivanCotter	AMGA
Physician-owned neurosurgery practices	36.7%	13.0%	15.1%	16.55
Hospital-owned neurosurgery practices	20.0%	78.6%	62.7%	83.55
Academic-owned neurosurgery practices	43.3%	n/a	6.3%	n/a
Other majority neurosurgery owner	n/a	8.5%	15.9%	n/a
Percentage of practices with academic affiliation	43.3%	Unknown	13.0% *	40.6% *

* Academic affiliation was reported in total only, these do not represent neurosurgery-specific data points

Participation

Questions	N	2021 % Yes	N	2022 % Yes
Time to complete survey?				
• 1 – 2 hours	24	2.08%	9	0.00%
• 3 – 4 hours	33	29.17%	15	26.92%
• 4+ hours	36	68.75%	20	73.08%

- The reported time it takes practices to complete the NERVES survey has increased from 62.65% of practices reporting more than four hours in 2017.
- Additionally, participation seems to be skewing towards Midwest and Southern practices as seen on the following slide.
- The NERVES Survey committee is actively working to grow the survey participation rate in the coming years.

Demographics – Neurosurgeons

<u>Geographic Region</u>	2018	2019	2020	2021	2022
East	15%	16%	13%	14%	11%
South	45%	41%	40%	44%	51%
Midwest	21%	26%	27%	23%	28%
West	18%	18%	20%	19%	10%

<u>Ownership</u>	N	2018	N	2019	N	2020	N	2021	N	2022
Physician-Owned	288	39%	357	44%	294	45%	208	33%	126	34%
Hospital-Owned	113	15%	105	13%	49	8%	66	10%	53	14%
Academic	357	46%	351	43%	299	47%	358	57%	190	52%

Demographics – Neurosurgeons

<u>Practice Size</u>	2018	2019	2020	2021	2022
1-5 FTE Physicians	12%	14%	15%	8%	4%
6-10 FTE Physicians	20%	17%	17%	12%	11%
11-20 FTE Physicians	34%	35%	20%	42%	50%
20+ FTE Physicians	34%	34%	48%	37%	35%

<u>Metropolitan Area</u>	2018	2019	2020	2021	2022
Metropolitan (Fewer than 250,000)	13%	12%	7%	9%	8%
Metropolitan (250,001-1,000,000)	28%	30%	31%	30%	17%
Metropolitan (More than 1,000,000)	59%	58%	62%	61%	75%

COVID-19 Data: Total Practice



COVID Participation Comparison

<u>COVID Compensation Participation</u>	2021 N	2022 N
Neurosurgery COVID-19 Related Compensation per FTE Neurosurgeon	147	45

- KSM notes that there was no difference in the reported responses for questions that asked participants to differentiate between values including COVID \$ and excluding COVID \$ due to a low response rate.
- This consistency between including COVID \$ and excluding COVID \$ may suggest that the impacts of COVID-19 on hospitals and physician practices normalized in 2022.

Practice COVID-19 Data: Financial Support

Question	# of Practices	% Yes
Did your practice receive funds through the Paycheck Protection Program (PPP)?	22	40.91%
If yes, in which round were PPP funds received?		
• Round 1	5	100%
• Round 2	3	*
• Round 3	2	*
If yes, was any portion forgiven?		
• Round 1	5	100%
• Round 2	2	*
• Round 3	0	*
Did practice receive HHS funds?	13	30.77%
Did practice secure CMS advances?	13	0%
Did practice claim ERC for payroll taxes?	13	7.69%
Overall impact of COVID-19 on practice?	14	
• High Impact		35.71%
• Low Impact		57.14%
• Unaffected		7.14%

Practice COVID-19 Data: Telehealth

Question	# of Practices	% Yes
Was practice utilizing telehealth services/technologies prior to the COVID-19 pandemic?	21	33.33%
If no, did practice begin utilizing telehealth services/technologies during the COVID-19 pandemic?	13	84.62%
Is practice continuing telehealth after the COVID-19 pandemic?	21	71.43%
If yes, to what extent?	14	
• Increasing Telehealth		0.00%
• Decreasing Telehealth		57.14%
• Same Level of Telehealth		42.83%
Average percentage of new patient visits conducted via telehealth	11	7.00%
Average percentage of established patient visits conducted via telehealth	15	11.00%
Average percentage of total patient visits conducted via telehealth	15	12.00%

Practice COVID-19 Data: Operations & Staffing

Question	# of Practices	% Yes or #
Average number of elective procedures suspended/disallowed	8	51 procedures
Average number of workdays where normal office hours was impacted	2	*
Did practice temporarily furlough any clinical personnel ?	20	5.00%
Average number of clinical FTEs furloughed	1	*
Average number of clinical FTEs subsequently reinstated	1	*
Did practice temporarily furlough any support personnel ?	20	5.00%
Average number of support FTEs furloughed	1	*
Average number of support FTEs subsequently reinstated	1	*
Did practice permanently lay off any clinical personnel ?	20	10.00%
Average number of clinical FTEs laid off	2	*
Average number of clinical FTEs subsequently reinstated	0	*
Did practice permanently lay off any support personnel ?	20	5.00%
Average number of support FTEs laid off	1	*
Average number of support FTEs subsequently reinstated	0	*

Practice COVID-19 Data: Remote Work & Daycare Offerings

Question	# of Practices	% Yes or #
Do any clinical personnel work remotely?	20	35.00%
Number of clinical FTEs working remotely prior to COVID-19 pandemic	0	*
Number of clinical FTEs working remotely during COVID-19 pandemic	5	10.80 FTEs
Number of clinical FTEs working remotely after COVID-19 pandemic	4	*
Do any support personnel work remotely?	20	75.00%
Number of support FTEs working remotely prior to COVID-19 pandemic	3	*
Number of support FTEs working remotely during COVID-19 pandemic	13	31.15 FTEs
Number of support FTEs working remotely after COVID-19 pandemic	12	18.75 FTEs
Median percentage of remote employees that are considered...	8	
Full-time remote		95.00%
Part-time remote		100%
On-site daycare available to practice prior to COVID-19 pandemic	20	10.00%
On-site daycare available to practice during COVID-19 pandemic	17	5.88%
On-site daycare available to practice after COVID-19 pandemic	17	11.76%

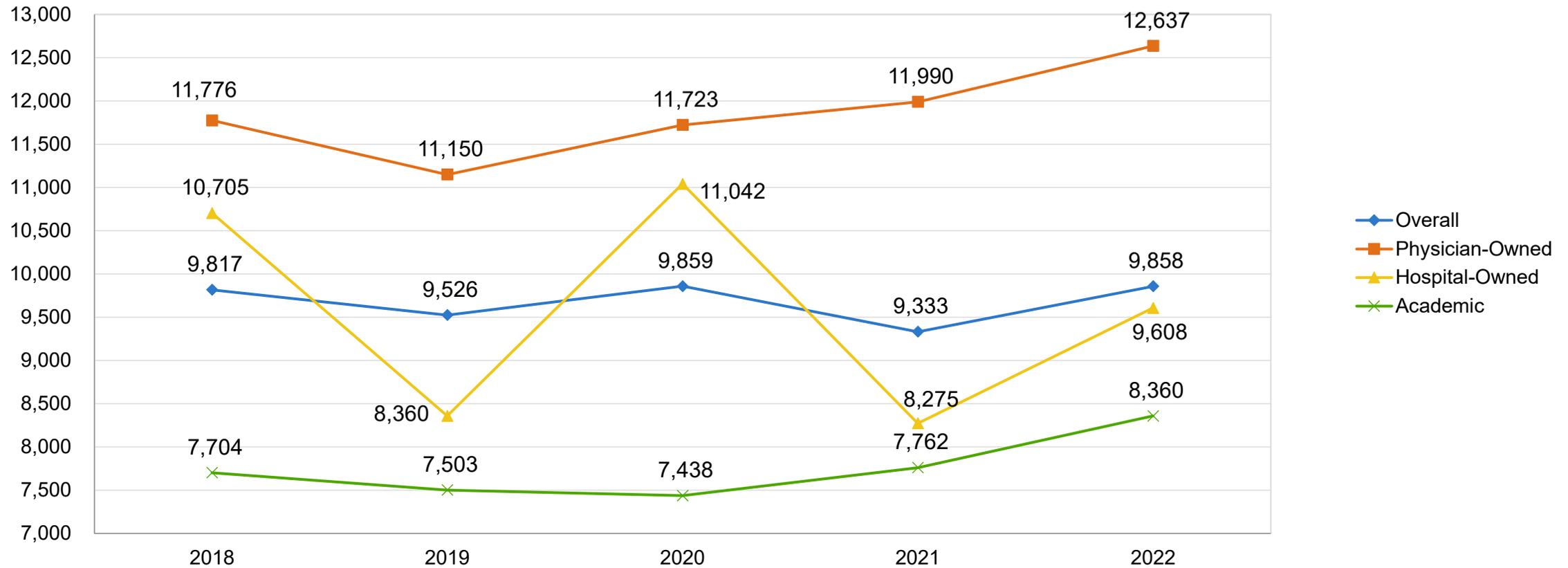
General Practice Data & Relevant Issues



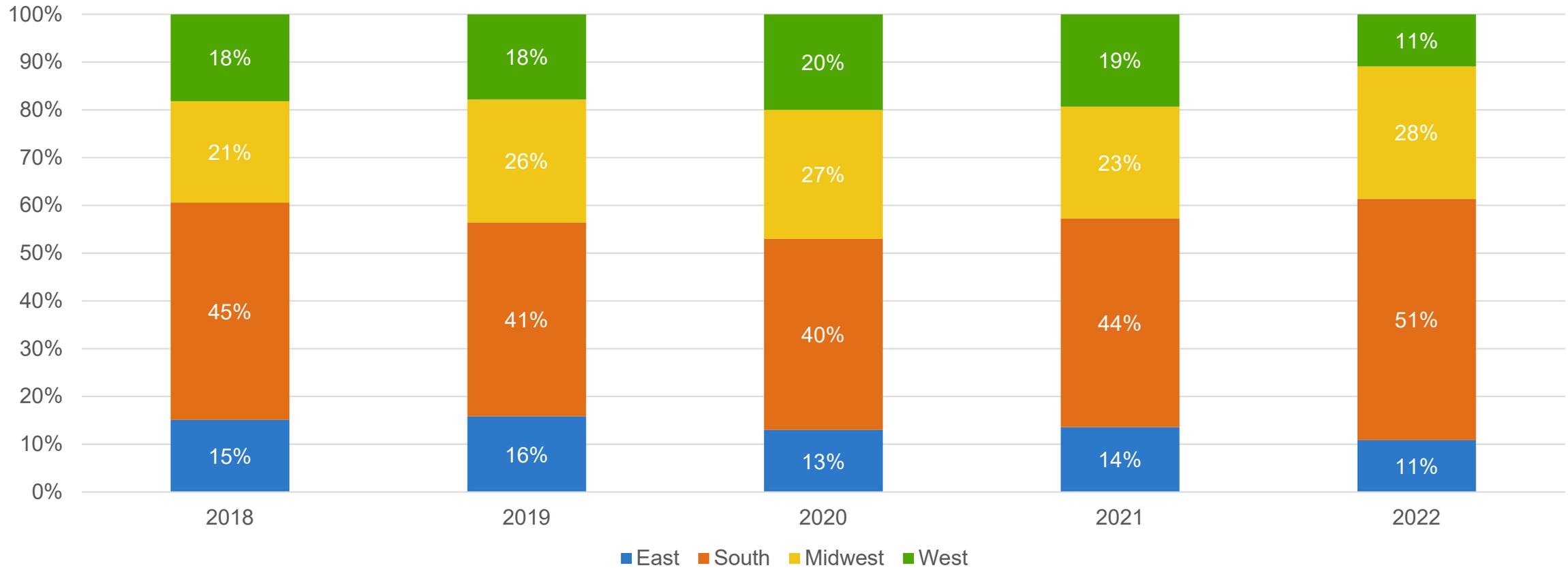
Reliability of Survey Data

	Overall	Physician-Owned	Hospital-Owned	Academic
Collections	\$864,825	\$1,153,556	\$844,172	\$736,403
wRVUs	9,858	12,637	9,608	8,360
Compensation	\$842,169	\$936,583	\$991,932	\$745,460
Collections per wRVU	\$85	\$89	\$74	\$84
Compensation per wRVU <i>(including COVID \$)</i>	\$87	\$79	\$91	\$93
Compensation per wRVU <i>(excluding COVID \$)</i>	\$87	\$79	\$91	\$93

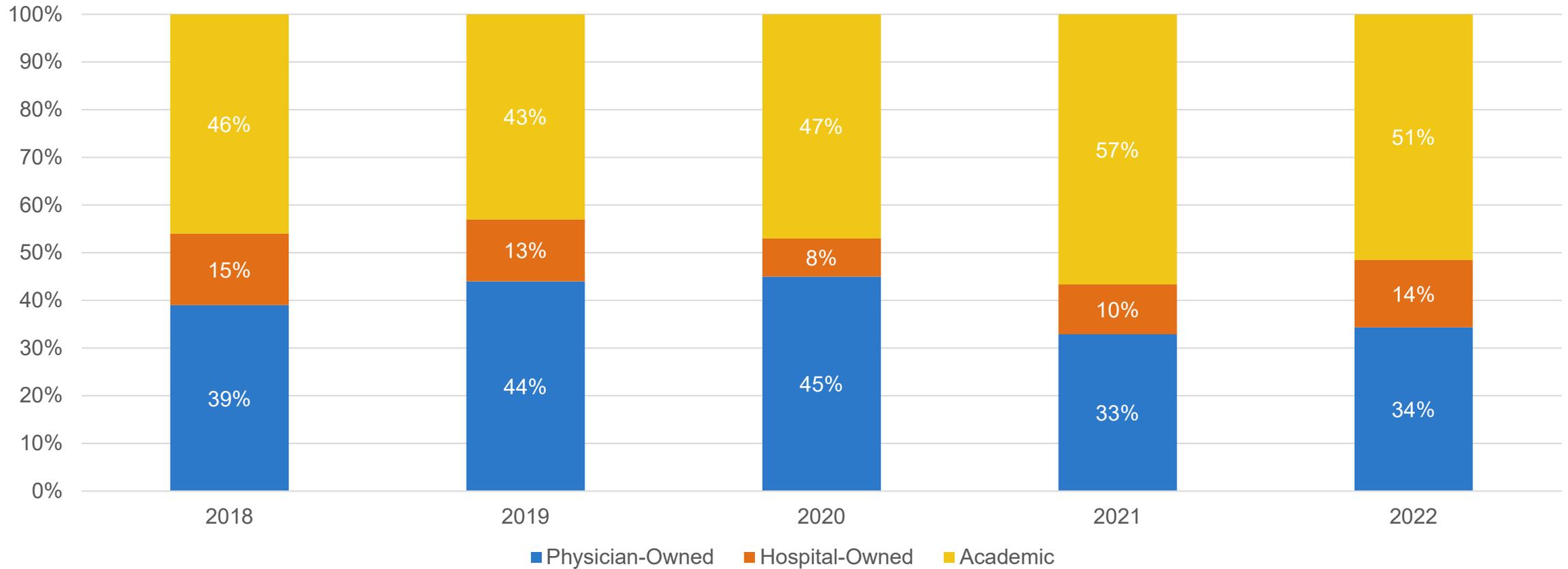
wRVU Productivity per FTE Neurosurgeon



Neurosurgeon Demographics – Geographical Mix



Neurosurgeon Demographics – Ownership Mix

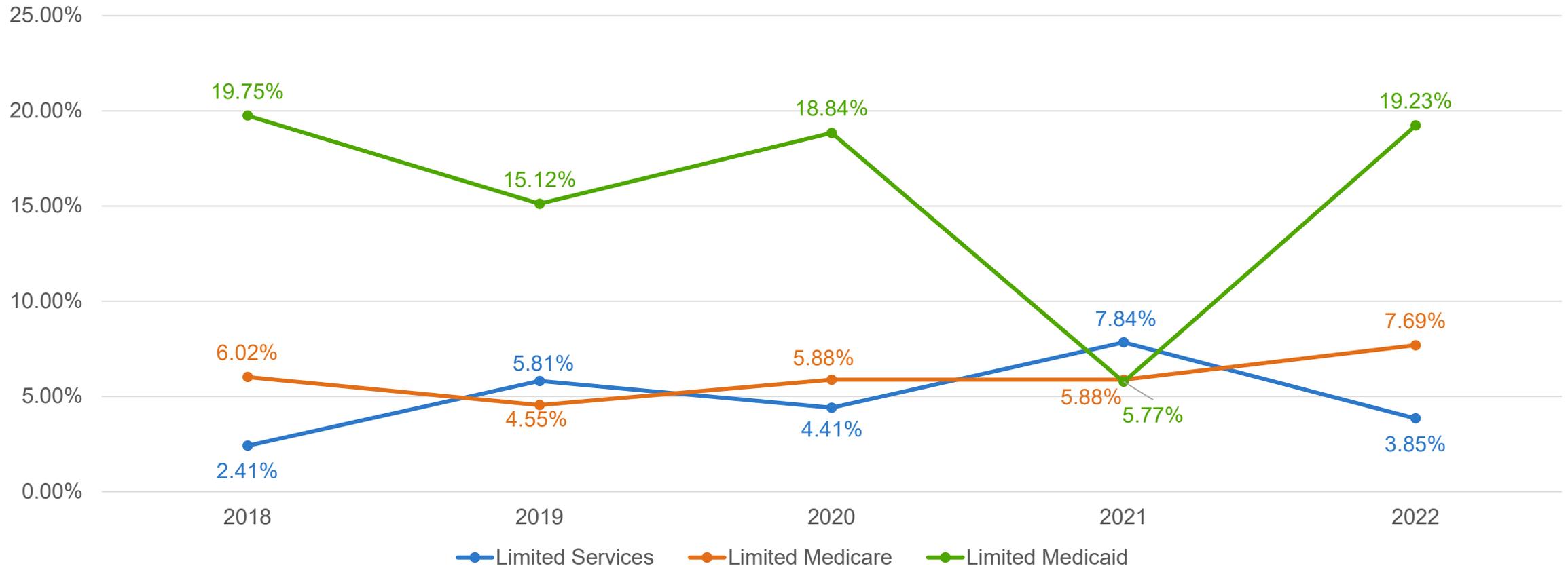


Relevant Issues

Questions	N	2021 % Yes	N	2022 % Yes
Time to complete survey?				
• 1 – 2 hours	24	2.08%	9	0.00%
• 3 – 4 hours	33	29.17%	15	26.92%
• 4+ hours	36	68.75%	20	73.08%
Are you currently participating in an ACO?	50	34.00%	23	39.13%
• Have you participated greater than 1 year?	20	80.00%	20	100.00%
Are you participating in a shared savings ACO?	48	22.92%	48	30.43%
• Have you received any savings?	10	60.00%	10	42.86%

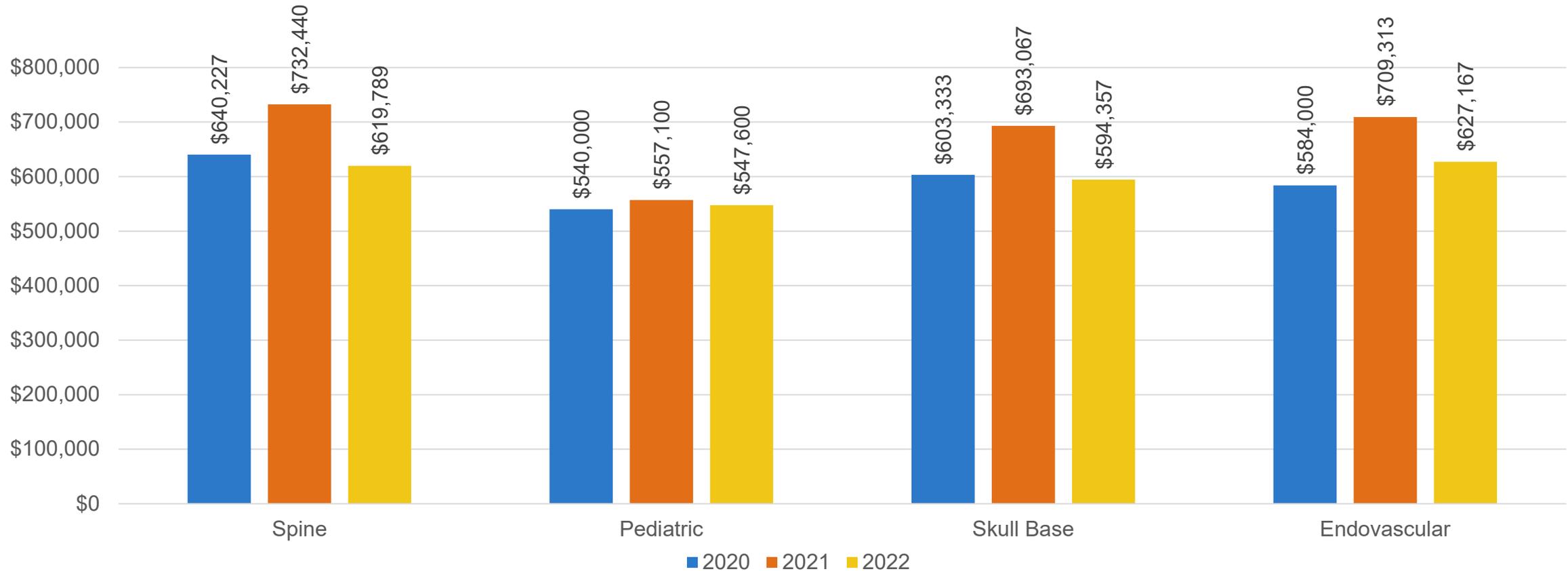
Other Relevant Issue	2018	2019	2020	2021	2022
Planning to Recruit	73%	77%	70%	75%	86%

Relevant Issues – Limited Services to Patients



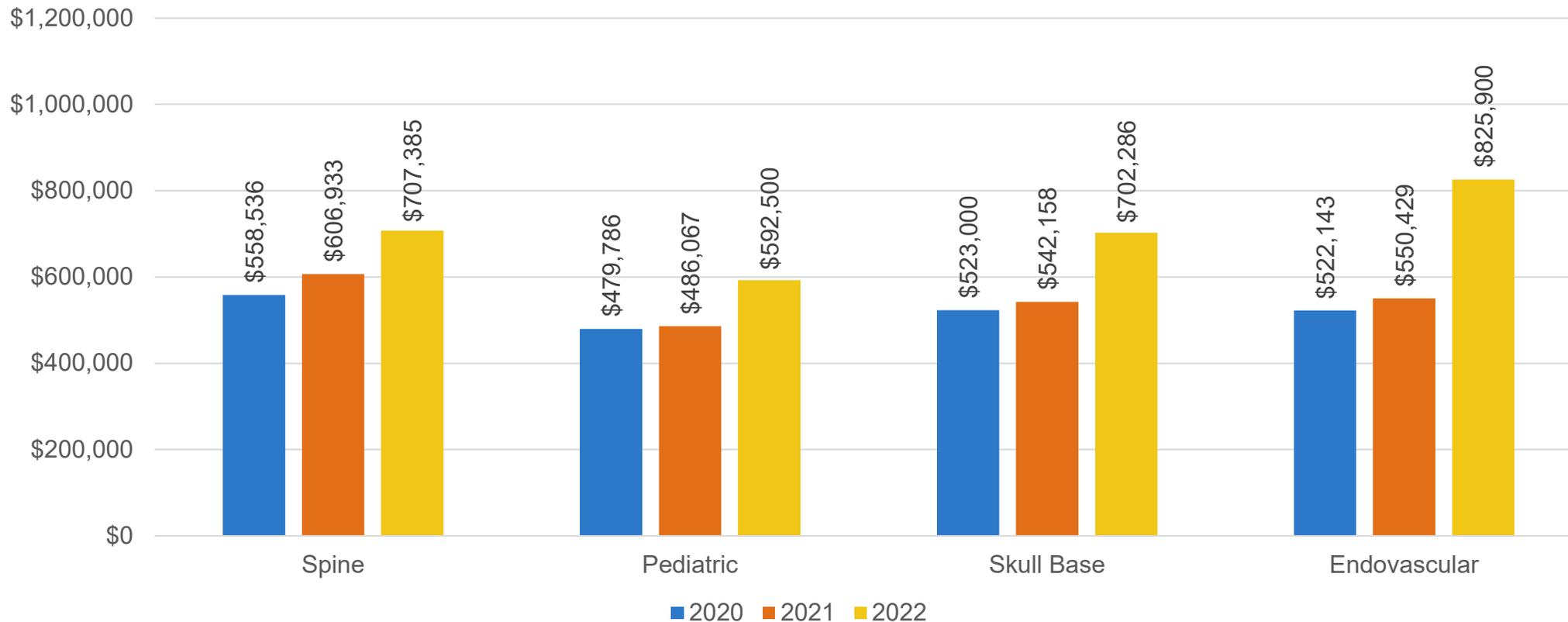
Relevant Issues – Median Starting Neurosurgeon Salary

New Recruits & Graduating Residents



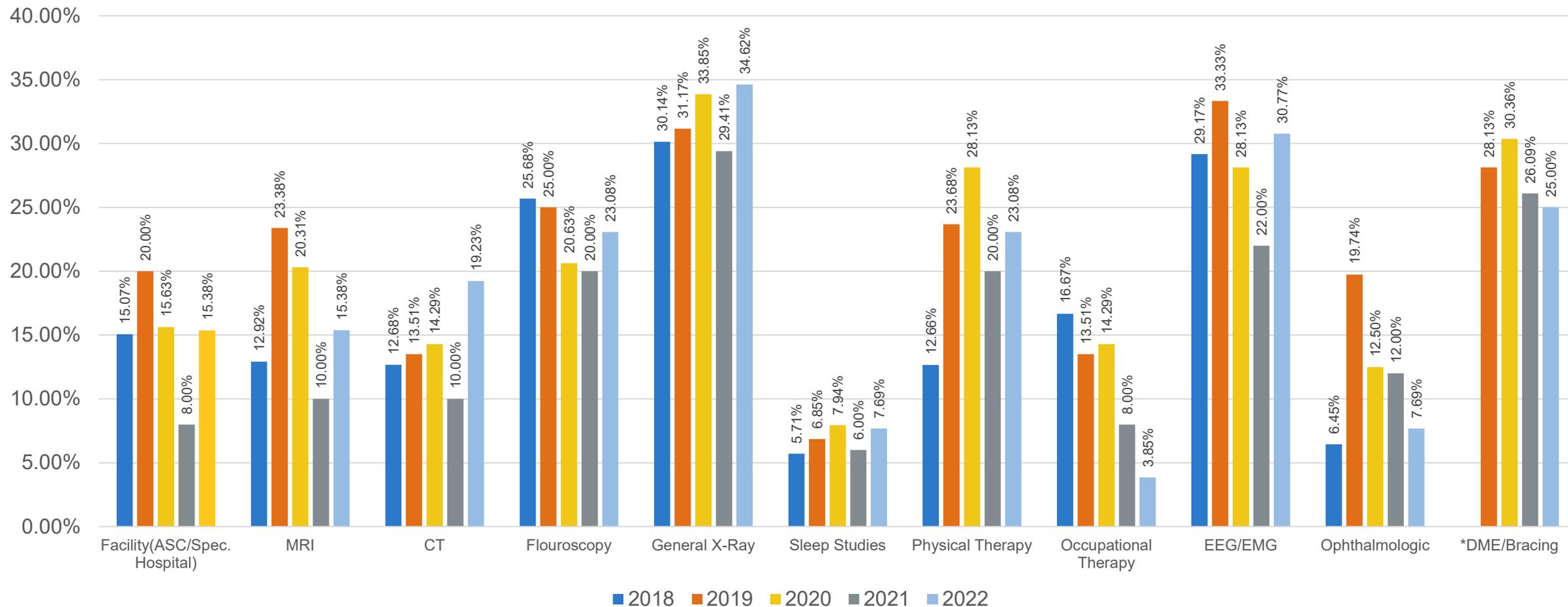
Relevant Issues – Median Starting Neurosurgeon Salary

Experienced Hires

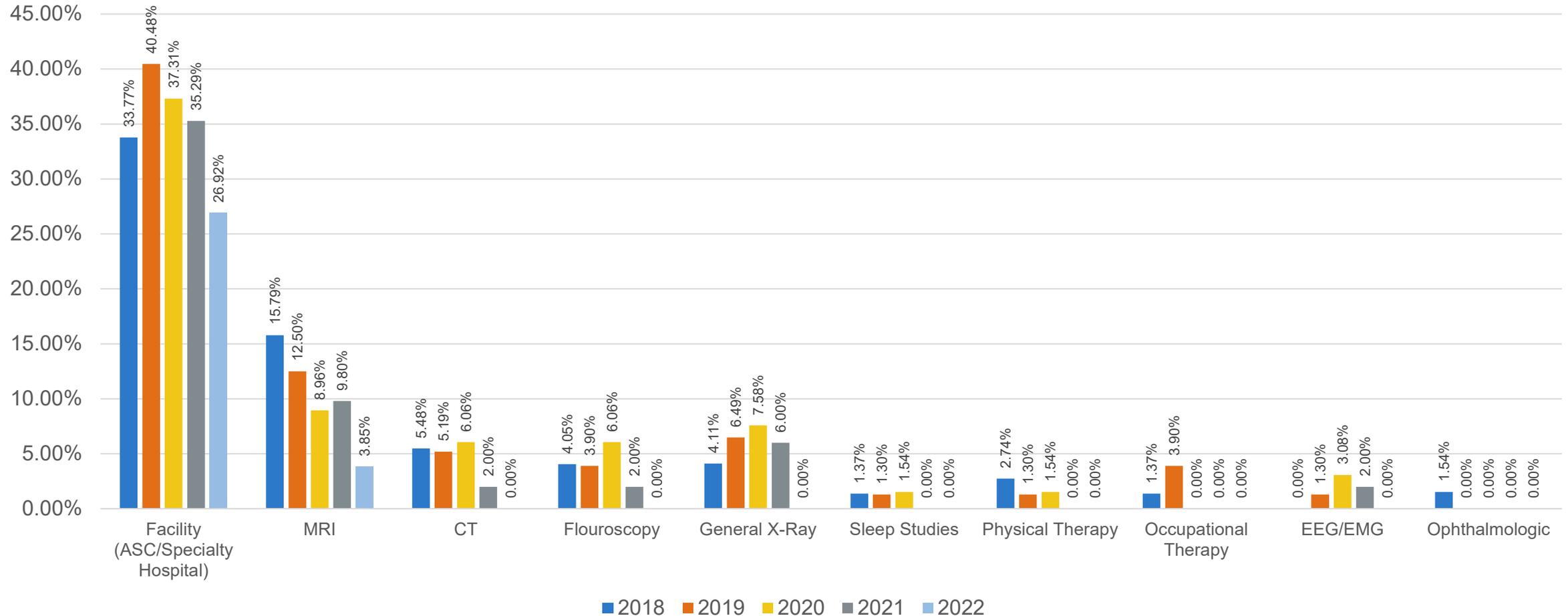


KSM notes that practices have significantly increased starting salaries for experienced hires over the past three years.

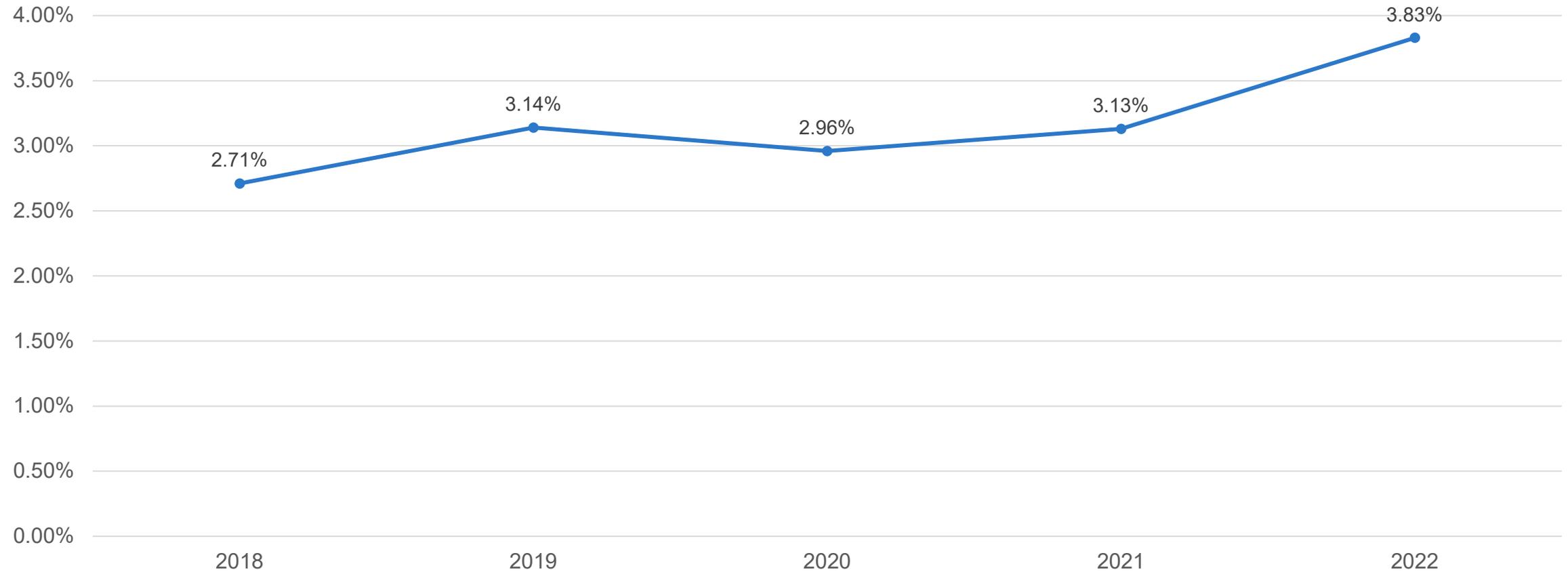
Relevant Issues – Ancillary Services Provided



Relevant Issues – Investors in Ancillary Services



Relevant Issues – Pay Raise % for Support Staff



Relevant Issues in 2021 and 2022

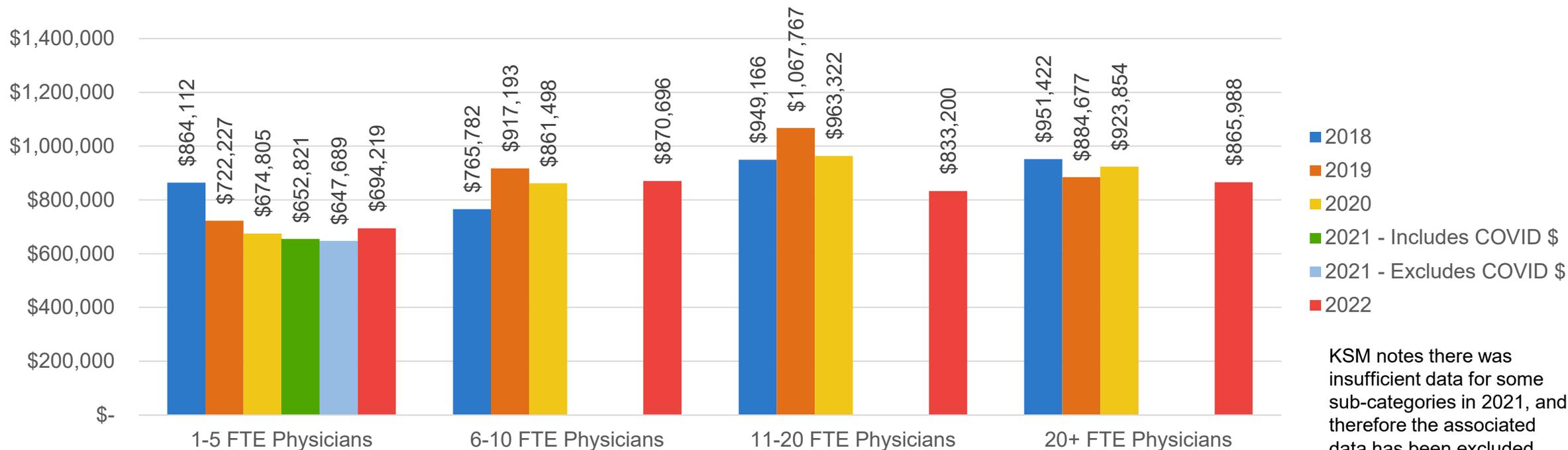
Question	N	2021 % Yes or #	N	2022 % Yes or #
Does your practice receive additional revenue for Medical Directorship?	46	60.87%	26	73.08%
What type of medical directors?				
• Cranial/Brain Tumors Neurosurgery	28	71.43%	17	76.47%
• Spinal Neurosurgery	27	59.26%	15	73.33%
• Pediatric Neurosurgery	24	41.67%	15	46.67%
• Endovascular/ Vascular Neurosurgery	26	69.23%	16	62.50%
• Other	27	74.07%	15	73.33%
What is the hourly rate?				
• Cranial/Brain Tumors Neurosurgery	12	\$326	8	\$344
• Spinal Neurosurgery	11	\$270	9	\$320
• Pediatric Neurosurgery	7	\$290	4	*
• Endovascular/ Vascular Neurosurgery	12	\$333	6	\$350
• Other	13	\$284	7	\$326
What is the average hours per year required?				
• Cranial/Brain Tumors Neurosurgery	13	183	6	208
• Spinal Neurosurgery	12	185	7	197
• Pediatric Neurosurgery	7	205	4	*
• Endovascular/ Vascular Neurosurgery	12	215	5	238
• Other	12	192	5	167

Relevant Issues in 2021 and 2022

Questions	N	2021 % Yes	N	2022 % Yes
Does your practice employ non-neurosurgeons to triage new patients?	50	56.00%	26	53.85%
Who is responsible for managing the practice's advanced practice providers?				
MD	12	24.49%	7	26.92%
APP Manager	17	34.69%	12	46.15%
Administrative Manager	18	36.73%	5	19.23%
Other	2	4.08%	2	7.70%
During the survey period has your practice been in discussion about selling all or part of your practice to a venture capital firm?	43	6.98%	*	*

Median Neurosurgeon Compensation – By Practice Size

Physician-Owned



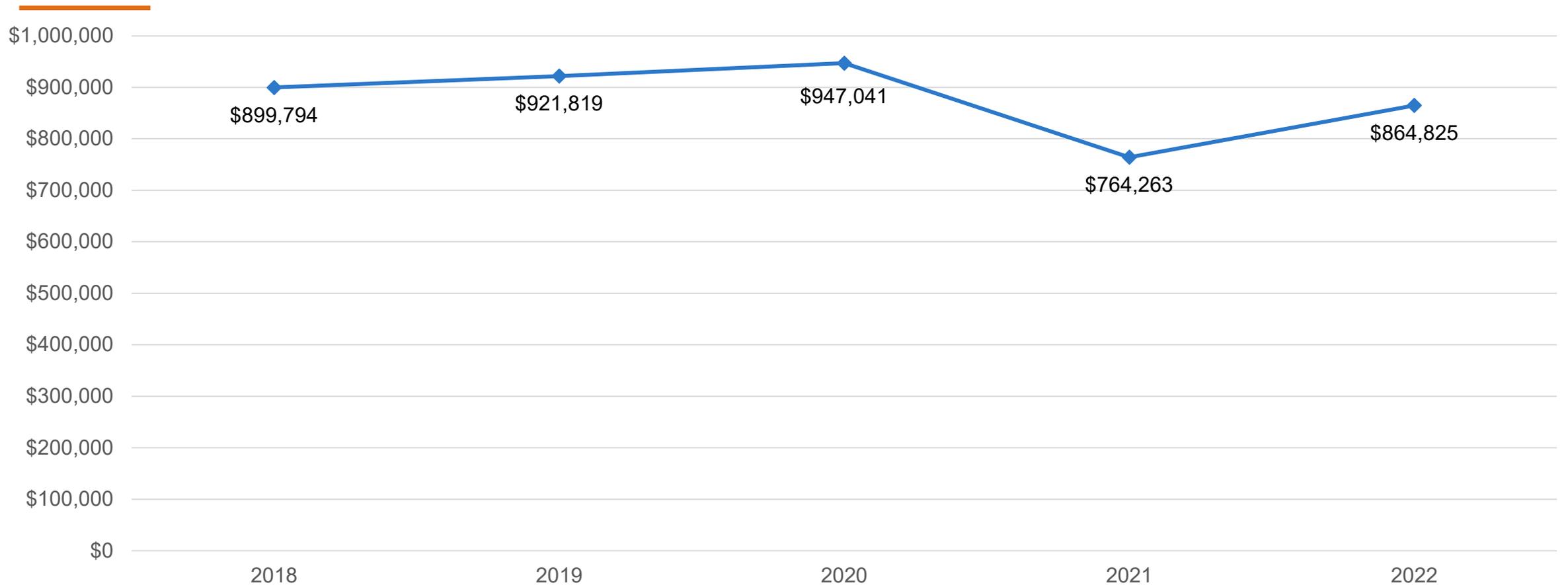
KSM notes there was insufficient data for some sub-categories in 2021, and therefore the associated data has been excluded

Year	1-5 FTE Physicians	6-10 FTE Physicians	11-20 FTE Physicians	20+ FTE Physicians
2018	71	47	50	120
2019	74	71	44	168
2020	43	51	60	140
2021	34	23	47	104
2022	13	44	183	129

Neurosurgery Reports: Neurosurgeon Production

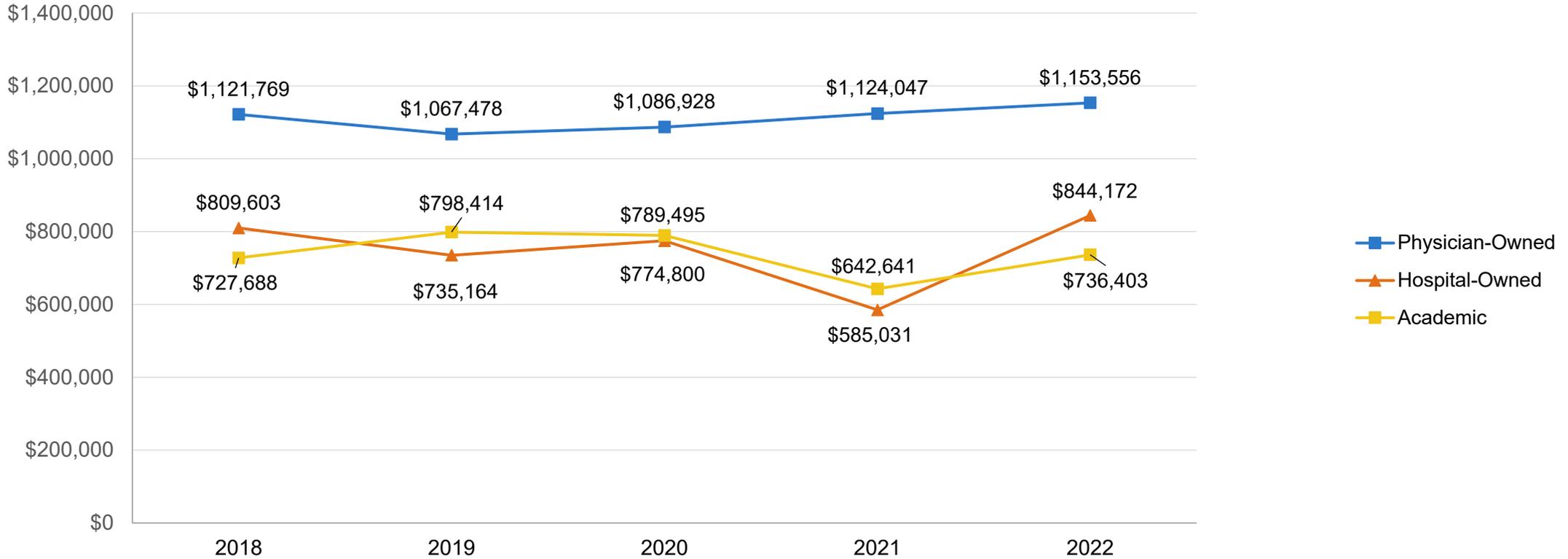


Median Collections per FTE Neurosurgeon - Overall



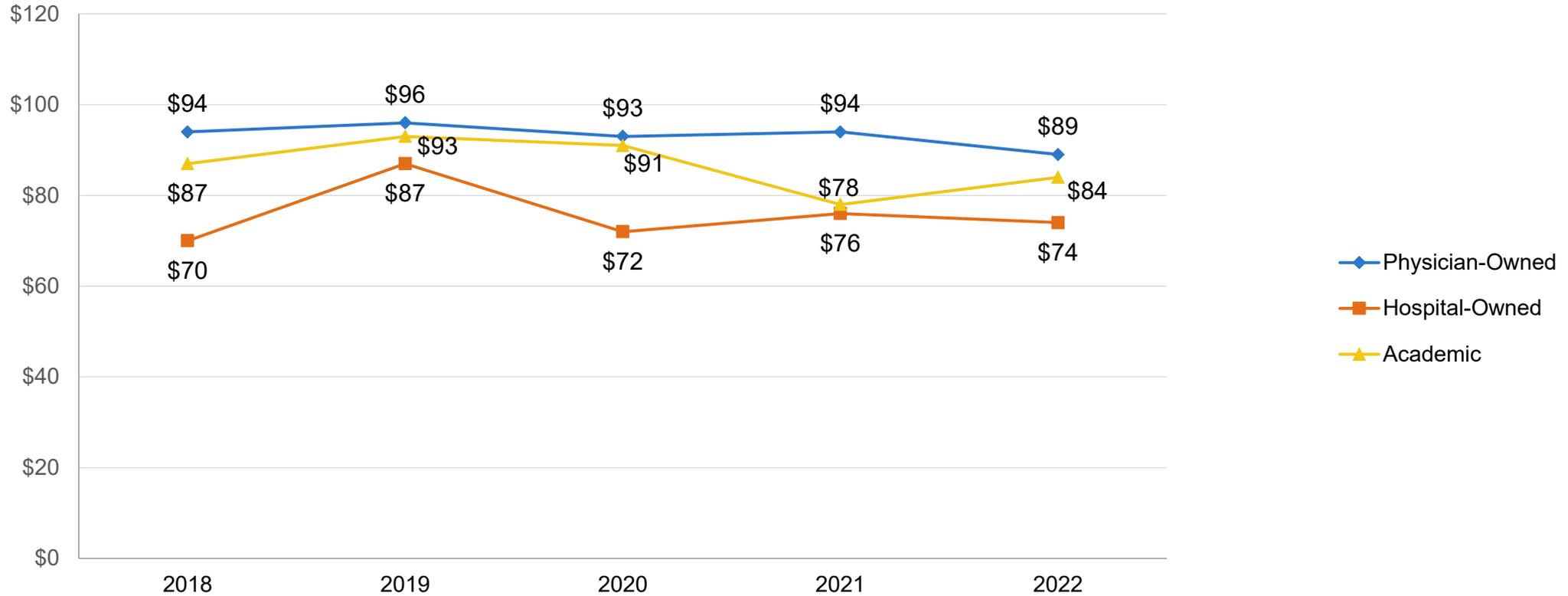
N	712	747	604	594	360

Median Collections per FTE Neurosurgeon - By Ownership



P N	292	333	287	199	126
H N	107	92	54	66	51
A N	313	322	263	329	183

Median Collections per wRVU – By Ownership

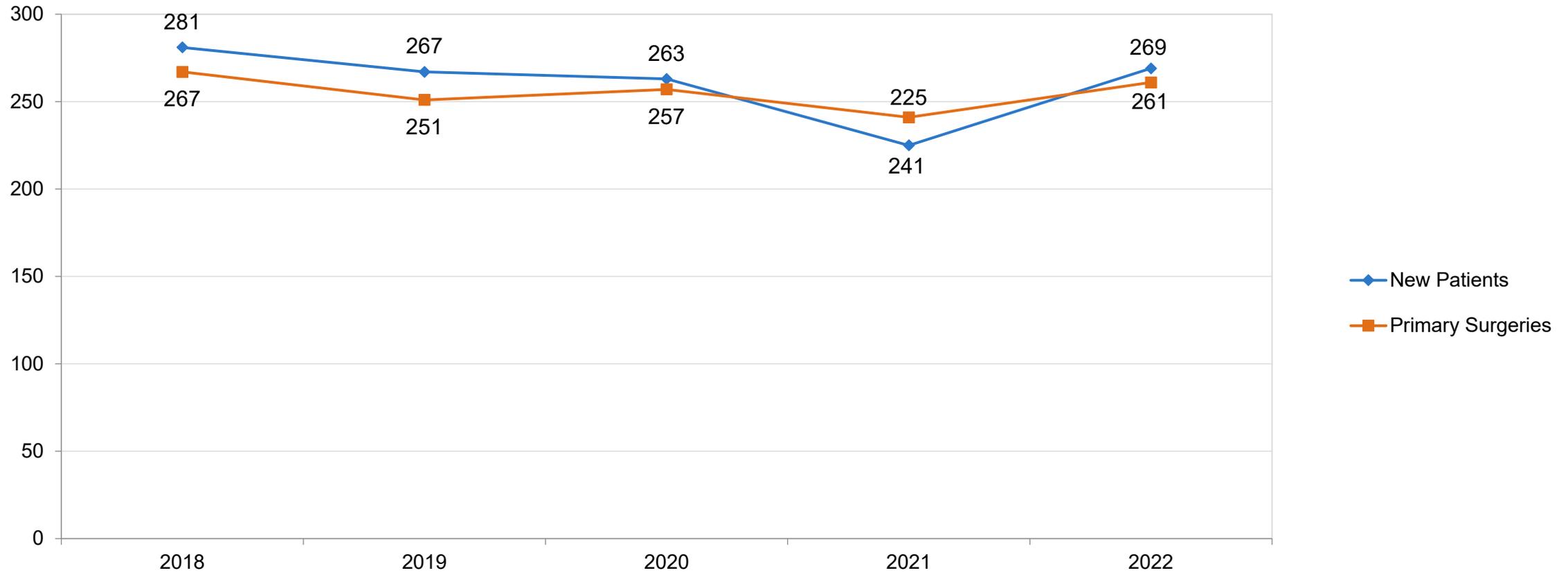


P N	239	251	233	161	115
H N	98	72	49	56	51
A N	302	320	259	303	180

Summary of Neurosurgeon Collections Data - Median

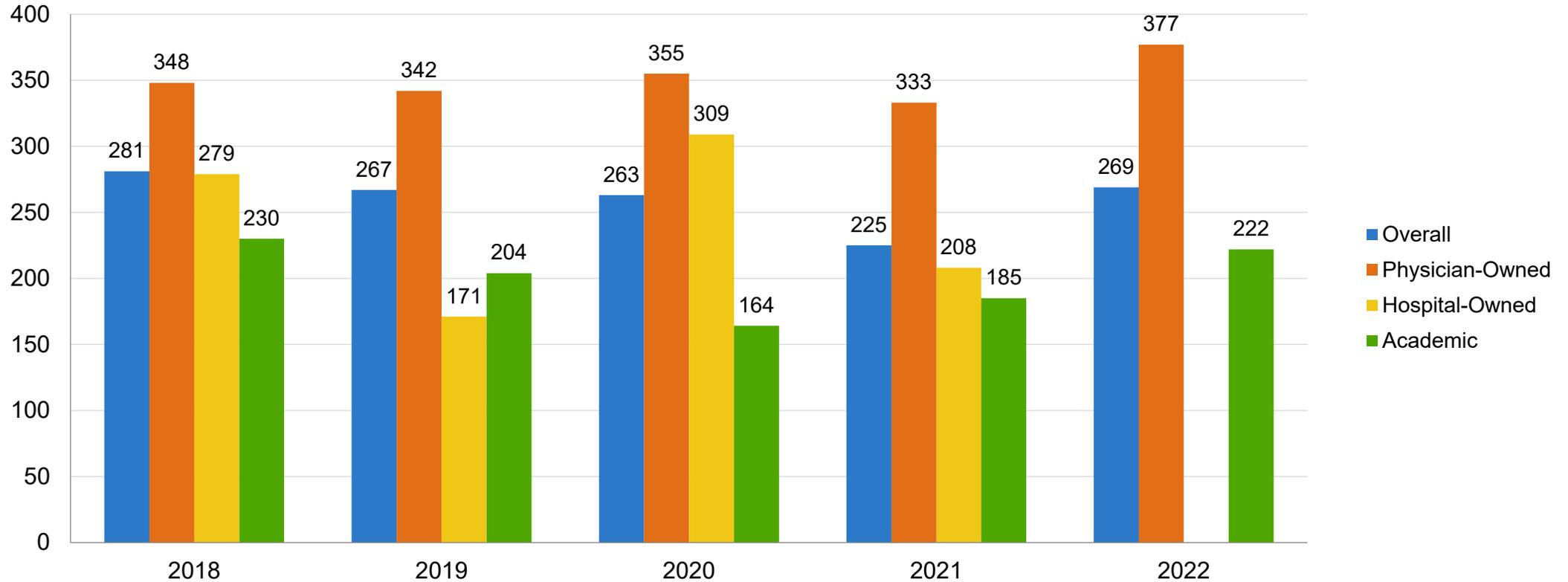
	2018	2019	2020	2021	2022
Collections per FTE	\$899,794	\$921,819	\$947,041	\$764,263	\$864,825
WRVUs per FTE	9,817	9,526	9,859	9,333	9,858
Collections per WRVU	\$87	\$93	\$91	\$83	\$85

Median New Patients and Primary Surgeries per FTE Neurosurgeon – Overall



NP N	617	660	546	525	264
PS N	629	683	542	530	270

Median Annual New Patients per FTE Neurosurgeon – By Ownership

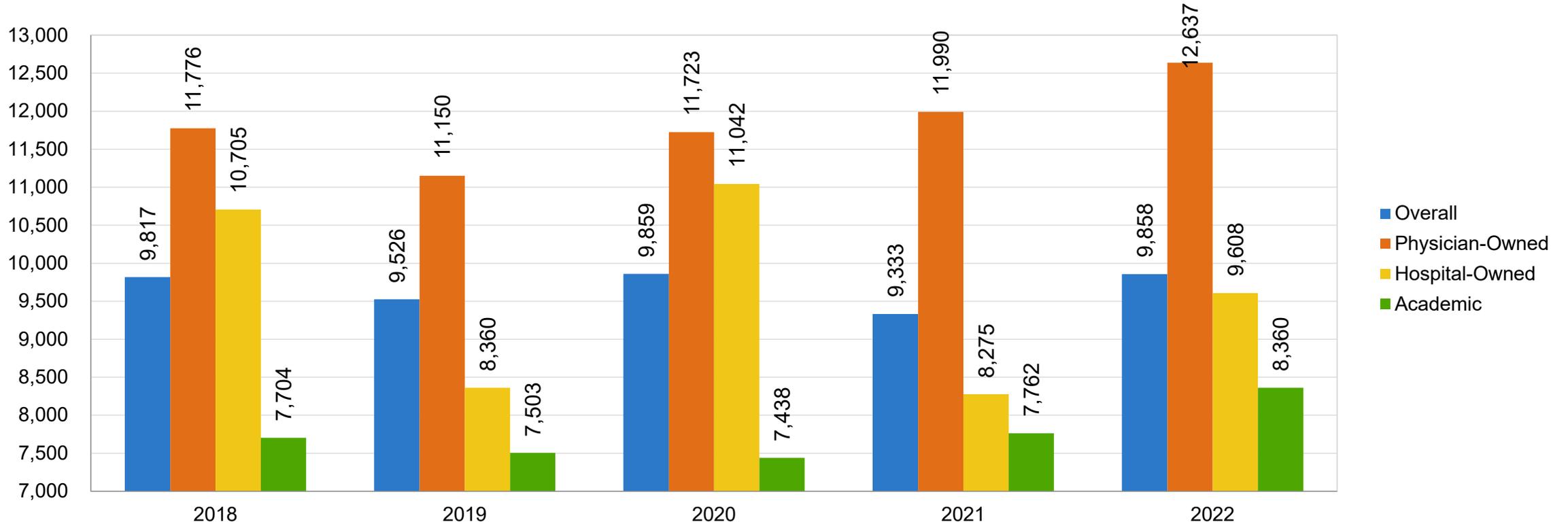


O N	617	660	546	525	264
P N	263	315	249	164	90
H N	89	57	41	41	26
A N	265	288	256	320	148

Median Primary Surgeries by Ownership – Overall

	2018	2019	2020	2021	2022
Physician-Owned	299	282	292	291	311
Hospital-Owned	268	239	283	221	*
Academic	231	223	210	207	222

Median WRVUs per FTE Neurosurgeon



O N	663	678	568	539	351
P N	239	258	233	162	115
H N	101	76	50	56	52
A N	323	344	285	321	184

Median Neurosurgeon \$ per WRVU – Physician-Owned



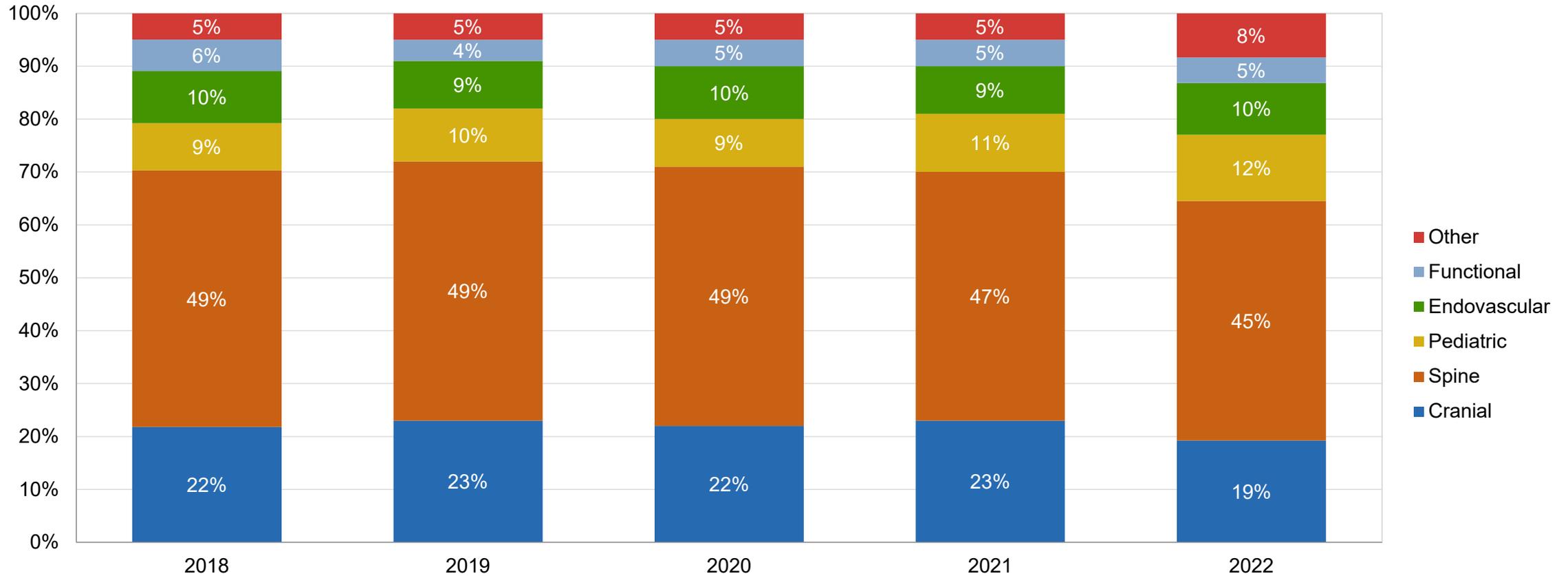
Median Neurosurgeon \$ per WRVU – Hospital-Owned



Median Neurosurgeon \$ per WRVU – Academic



Neurosurgeons Percentage of Practice



N=	734	783	628	546	349
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Neurosurgeon Subspecialty Data

For the 2022 survey, collections, compensation, and WRVU data was presented for the following subspecialties:

- Cranial
- Pediatric
- Spine
- Vascular / Endovascular
- Functional
- Other
- Adult

The data was presented for each subspecialty as follows:

- Greater than 25%
- Greater than 50%
- Greater than 75%
- Greater than 90%
- 100%

Neurosurgery Reports: Call Pay



Median Daily Call Compensation

	N	2021 Median
Frequency of Call - General	14	Every 6 days *
Frequency of Call - Specialty	9	Every 4 days *
Hours of Coverage Provided	19	24 hours
Paid Additional Fees for Call Coverage	30	66.67%
Multiple Facilities Covered Simultaneously	29	48.28%

Type of Facility Covered:		
Level 1 Trauma	20	30.51%
Level 2 Trauma	20	8.47%
Level 3 Trauma	20	8.47%
Emergency Room	20	52.54%

Historical Frequency of Call	2018	2019	2020	2021	2022
General	6 days	5 days	6 days	6 days	6 days
Specialty	4 days	5 days	5 days	4 days	4 days

Overall Median Daily Call Pay Per Contract

Geographic Region	N	2021	N	2022
East	10	*	2	*
South	51	\$2,000	22	\$3,961
Midwest	15	\$2,000	14	\$2,704
West	15	\$2,500	4	*

Ownership	N	2021	N	2022
Physician-Owned	49	\$2,144	29	\$2,500
Hospital-Owned	11	\$2,500	3	*
Academic	31	\$1,500	10	\$1,460

- In 2022, KSM notes overall median daily call pay per contract increased for all geographic and practice ownership categories, other than Academic.

Overall Median Daily Call Pay Per Contract

	2018	2019	2020	2021	2022	2022 N
Trauma	\$2,100	\$1,500	\$2,625	\$2,500	2,767	19
Level 1 Trauma Pay	\$2,466	\$2,770	\$3,000	\$2,767	3,218	10
Level 2 Trauma Pay	\$2,000	\$2,225	\$2,250	\$2,500	*	5
Level 3 Trauma Pay	\$1,385	*	*	*	*	4
Emergency Department	\$1,390	\$2,225	\$1,622	\$1,500	1,925	22
Overall N	143	154	106	91	42	

Trauma Level 1 Daily Call Pay Per Contract

2022	N	25 th Percentile	Median	75 th Percentile	90 th Percentile
Trauma Center Level 1 Total	10	2,717	3,218	5,175	7,648
Restricted	3	*	*	*	*
Unrestricted	36	1,788	2,560	3,526	5,450

2021	N	25 th Percentile	Median	75 th Percentile	90 th Percentile
Trauma Center Level 1 Total	23	1,573	2,767	5,150	6,340
Restricted	9	1,250	2,000	2,431	3,852
Unrestricted	72	1,348	2,000	2,773	4,500

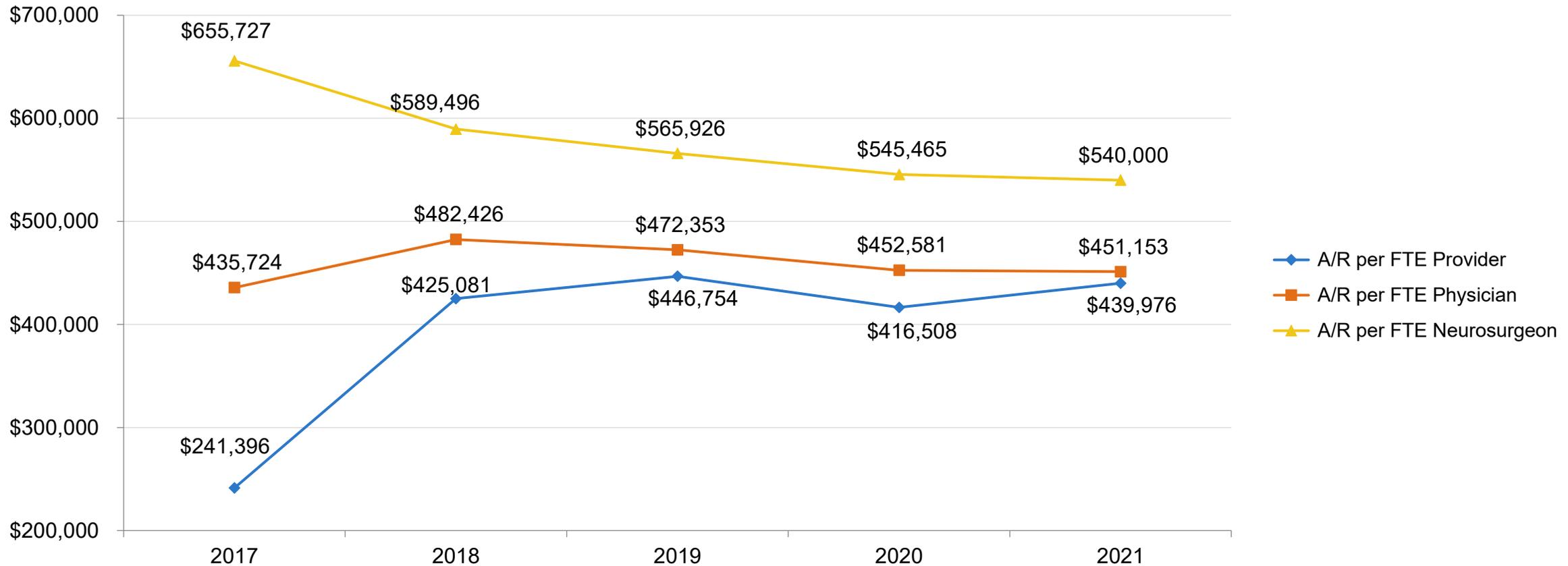
Additional On-Call Relevant Data

Question	2021 % Yes	2022 % Yes
Trauma vs. Emergency Department <ul style="list-style-type: none"> Trauma Emergency Department 	N=51 41.01% 58.99%	N=20 45.61% 54.39%
Trauma Center Level <ul style="list-style-type: none"> Level 1 Level 2 Level 3 	N=36 66.04% 24.53% 9.43%	N=16 64.29% 17.86% 17.86%
Restricted vs. Unrestricted Call? <ul style="list-style-type: none"> Restricted Call Unrestricted Call 	N=47 13.45% 86.55%	N=20 7.27% 92.73%
Reimbursement for under funded patients? <ul style="list-style-type: none"> Yes No 	N=47 3.10% 96.90%	N=18 1.82% 98.18%
Which method? <ul style="list-style-type: none"> Medicare Medicaid Other 	N=3 * * *	N=1 * * *
Separately bill for services rendered in addition to receiving call pay? <ul style="list-style-type: none"> Yes No 	N=48 92.42% 7.58%	N=18 92.73% 7.27%
Median number of physicians that take call	N=50 5	N=20 6

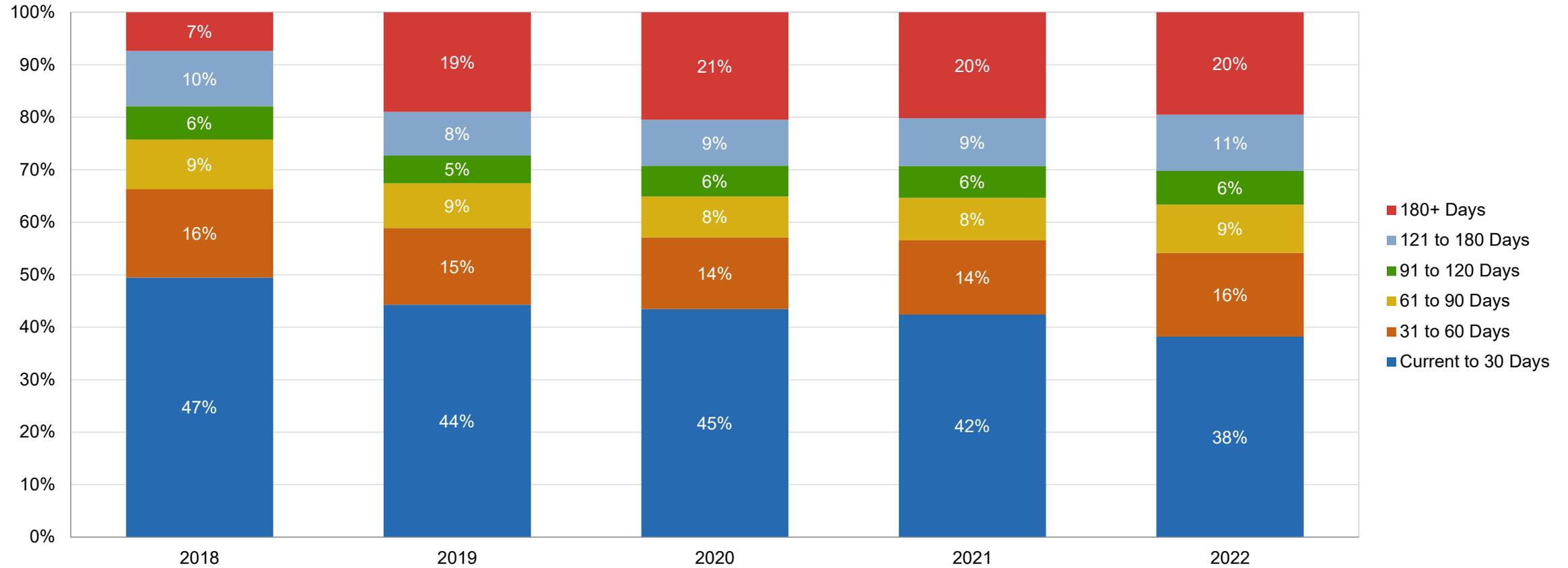
Neurosurgery Reports: Practice Data



Median Accounts Receivable

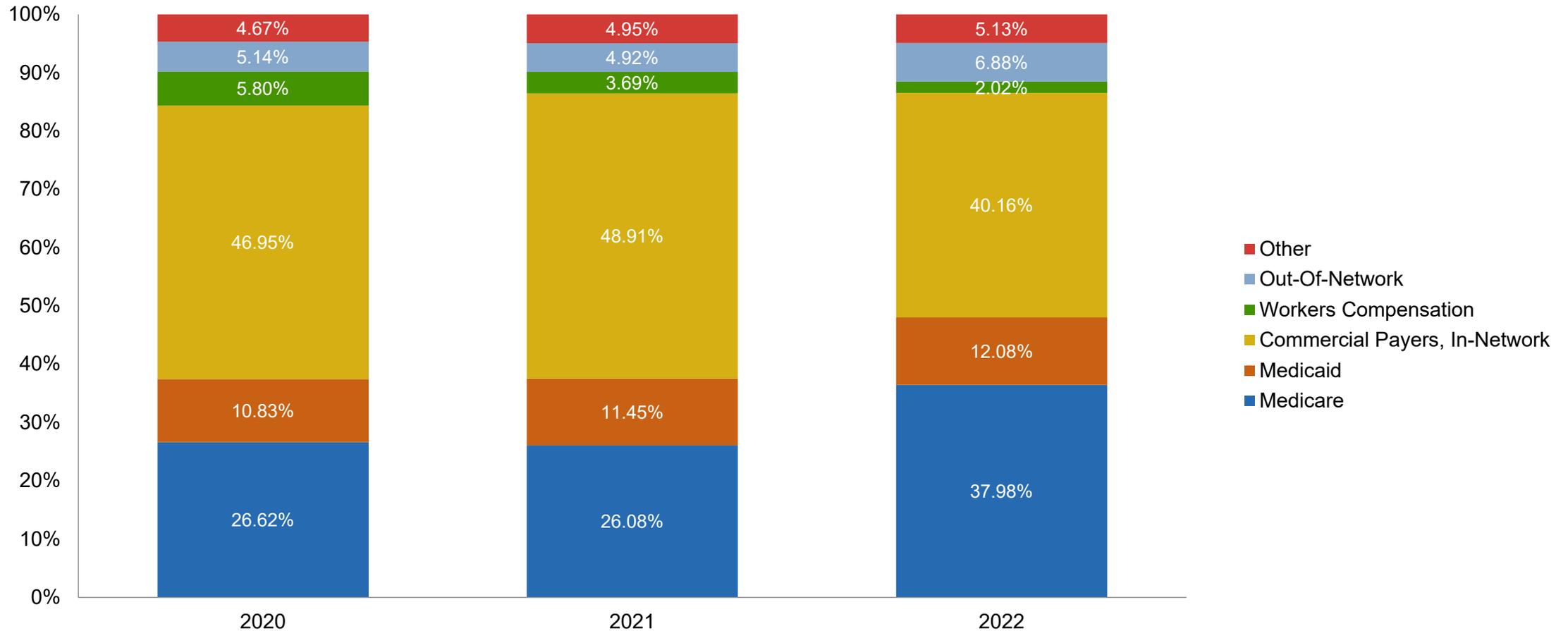


A/R Aging



N	72	75	58	47	23
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Average Practice Payor Mix



Median Practice Financial Statement & FTE Summary – 2022

2022	Overall	Physician-Owned	Hospital-Owned	Academic
Total Practice Revenue	15,347,831	16,521,448	13,428,730	15,455,350
Total Support Staff	3,029,140	3,480,853	*	2,977,985
Professional Liability Insurance	558,849	408,757	*	947,956
Other Overhead Costs	2,599,416	3,415,439	*	3,078,486
Total Overhead Costs	4,649,512	4,549,248	*	5,054,475
Physician Salaries & Benefits	13,363,946	13,406,335	*	13,321,557
Net Income	(289,728)	141,000	(289,728)	(2,597,118)
Neurosurgeon FTEs	9.0	7.3	8.0	13.0
Physician FTEs	13.3	7.3	*	17.7
Provider FTEs	24.4	15.8	28.0	31.7

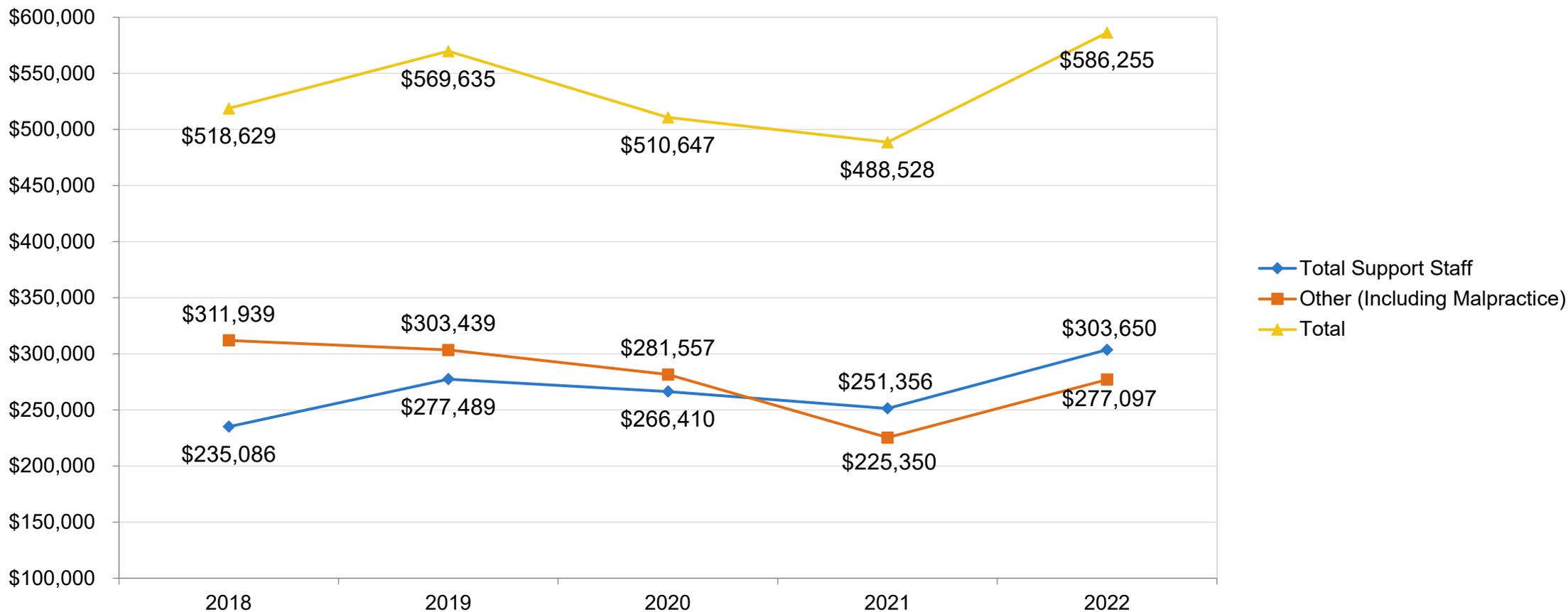
Median Practice Financial Statement & FTE Summary – 2021

2021	Overall	Physician-Owned	Hospital-Owned	Academic
Total Practice Revenue	11,590,329	9,870,282	8,225,918	16,087,420
Total COVID Revenue <i>(included in Total Practice Revenue above)</i>	579,814	670,000	*	*
Total Support Staff	1,897,611	1,687,895	828,666	2,587,002
Professional Liability Insurance	325,143	154,407	154,363	638,197
Other Overhead Costs	1,203,307	1,117,428	456,912	2,416,143
Total Overhead Costs	4,175,210	3,200,205	1,086,616	4,540,166
Physician Salaries & Benefits	9,869,895	4,345,721	8,079,412	13,554,789
Net Income	(152,412)	7,666	(883,289)	(1,777,237)
Neurosurgeon FTEs	9.0	6.0	5.6	13.0
Physician FTEs	11.0	6.0	5.7	17.6
Provider FTEs	20.0	11.8	9.0	28.2

Neurosurgery Costs and Staffing

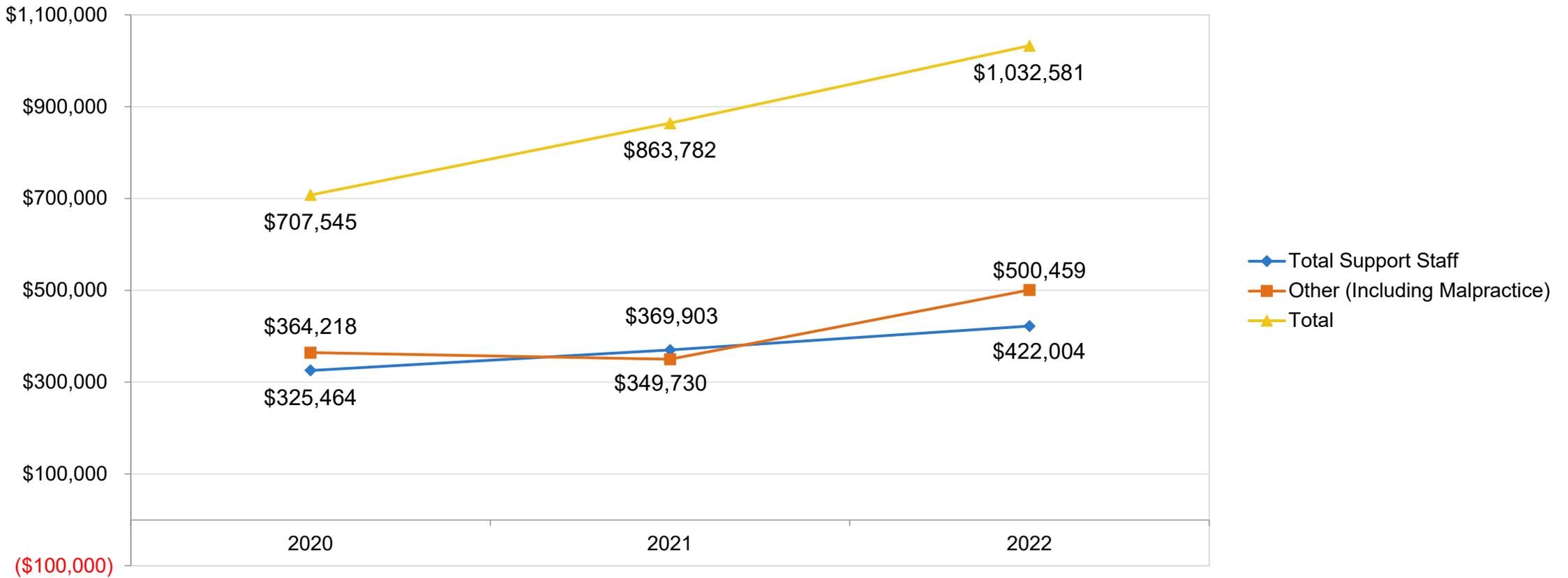


Median Operating Costs per FTE Neurosurgeon – Overall



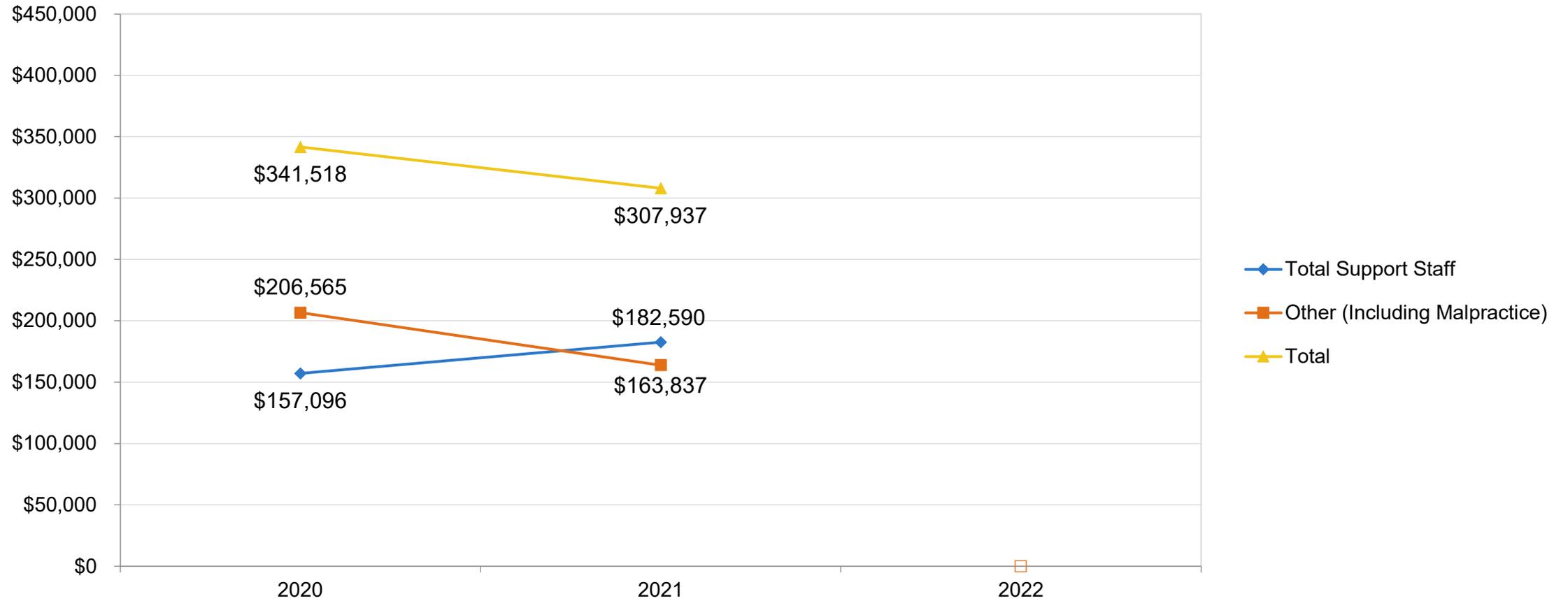
N	75	80	66	50	26

Median Operating Costs per FTE Neurosurgeon – Physician-Owned



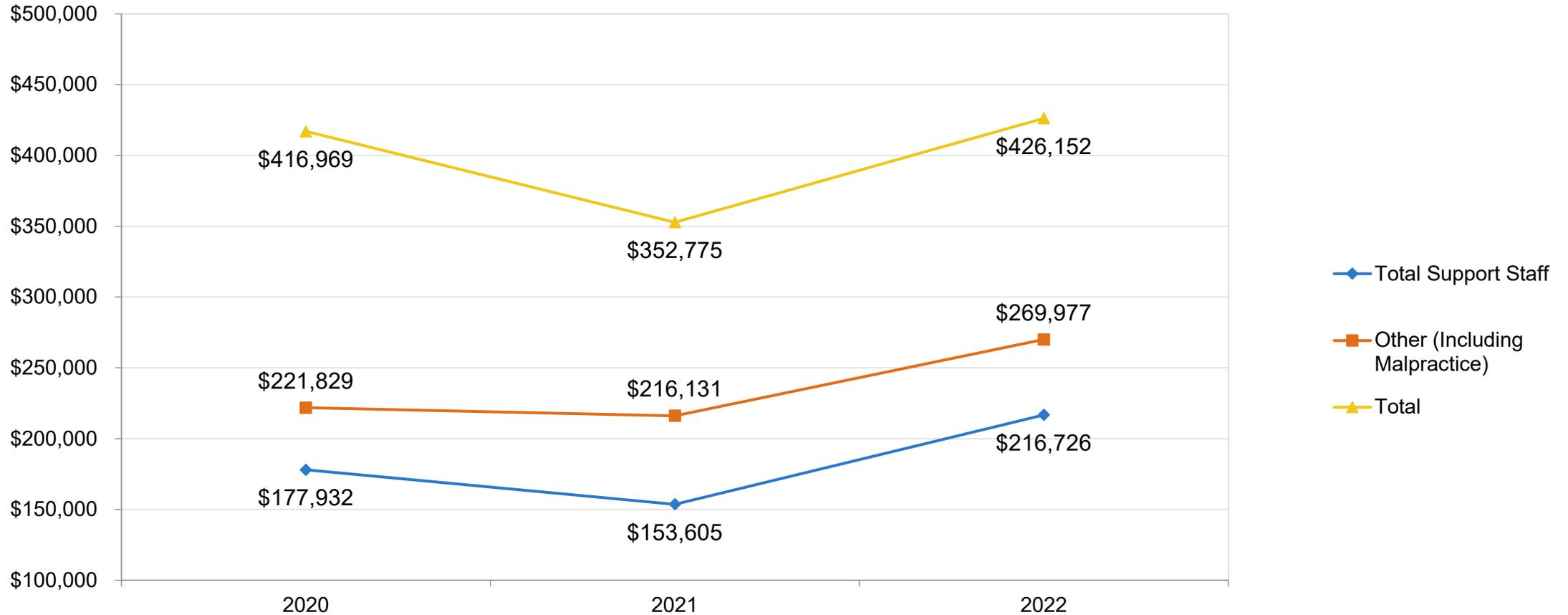
N	37	22	10

Median Operating Costs per FTE Neurosurgeon – Hospital-Owned



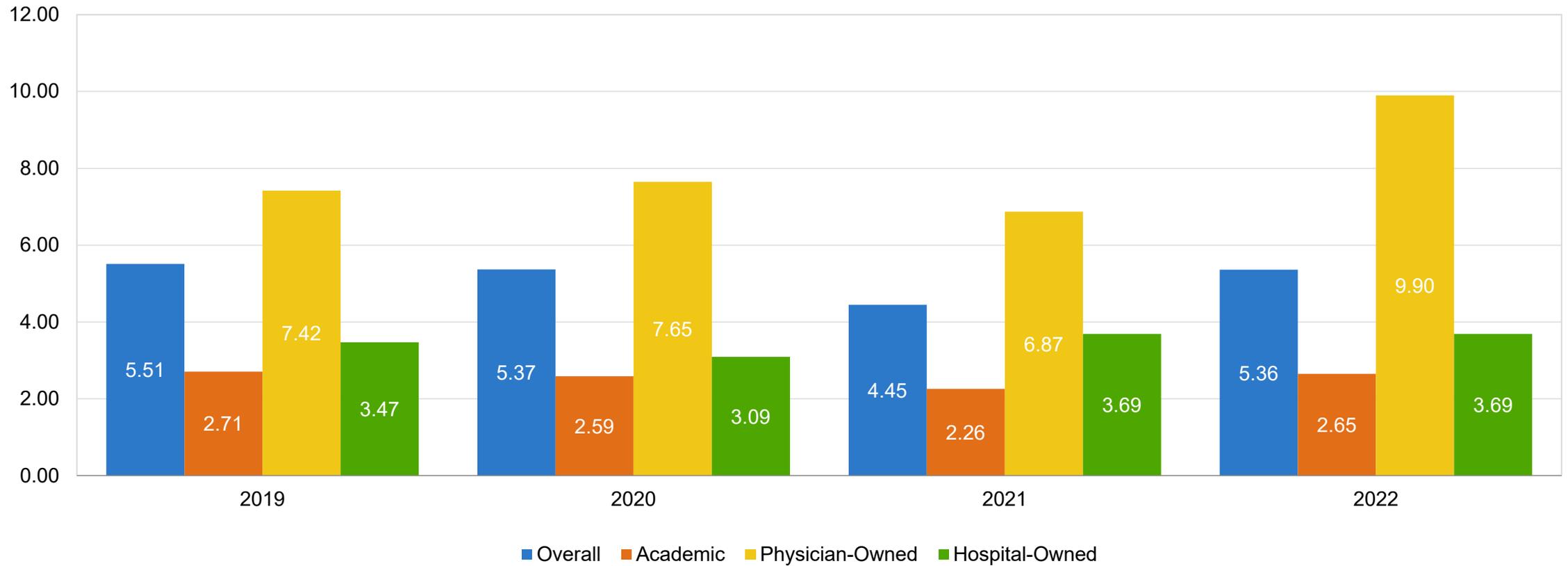
N	10	10	4
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Median Operating Costs per FTE Neurosurgeon – Academic



N	2020	2021	2022
	19	18	12

Mean FTE Support Staff Per FTE Neurosurgeon



N	83	65	50	26

Academic Practice Information



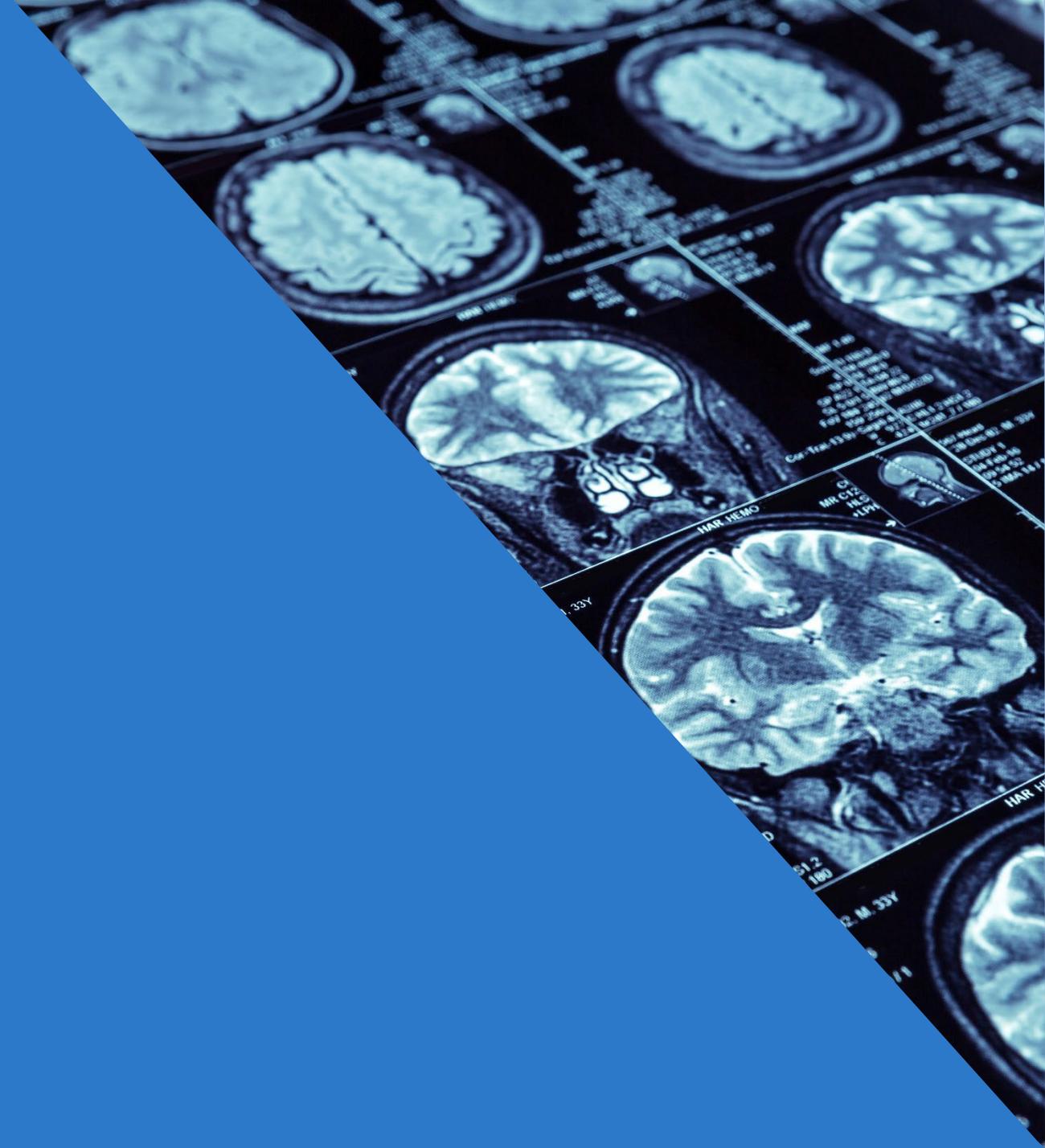
Academic Practice – Median Financial Support Received From Teaching Hospital

	N	2021	N	2022
Medical Director	14	\$333,214	9	\$261,011
Mid-Level Practitioners	11	\$814,937	8	\$590,834
Mid-Level FTE	9	6.6	8	6.1
Research	3	*	3	*
Faculty Member Start-Up	5	\$778,712	3	*
General Administrative Staff	6	\$164,816	4	*
General Support	9	\$2,508,952	5	\$141,100
Uncompensated Care	1	*	1	*
Other	6	\$2,299,762	5	\$1,757,551
Total Support Area	16	\$3,516,137	12	\$3,222,880
Total Support per FTE	16	\$203,566	12	\$233,949
Profit Contribution Dollars	3	*	4	*
Profit Contribution Margin	4	*	5	5.32%

Academic Practice – Median Financial Support Received From Medical School

	N	2021	N	2022
Medical Director	1	*	1	*
Mid-Level Practitioners	0	*	0	*
Mid-Level FTE	0	*	0	*
Research	7	\$169,032	6	\$454,481
Faculty Member Start-Up	4	*	4	*
General Administrative Staff	4	*	2	*
General Support	10	\$444,240	8	\$272,804
Uncompensated Care	0	*	0	*
Other	2	*	2	*
Total Support Area	13	\$530,829	9	\$1,238,032
Total Support per FTE	13	\$33,177	9	\$66,190
Tax Percentage	10	8.11%	5	4.48%
Other Institution Overhead	8	16.13%	3	*
Total Neurosurgery Faculty FTE	13	16	9	13
Total Residents in Program	13	14	9	14

Administrative Leadership



Administrator/CEO - Median

	2018	2019	2020	2021	2022	2022 N
% Employ Administrator/CEO	90%	92%	87%	*	*	26
Median Annual Base Salary	\$150,000	\$150,000	\$153,500	\$168,465	\$180,000	25
% Eligible for Bonus	71%	76%	71%	73%	65%	26
Median Annual Bonus	\$21,250	\$16,305	\$16,300	\$19,740	\$25,000	27
% Employment Contract	35%	39%	38%	31%	35%	26
% Severance Package	22%	25%	29%	23%	27%	26
Avg. Years with Practice	10	10	11	10	10	26
Avg. Years in Healthcare Industry	22	22	22	21	20	26

Office Manager - Median

	2018	2019	2020	2021	2022	2022 N
% Employ Office Mgr.	10%	8%	13%	*	*	14
Median Annual Salary	\$67,000	\$74,110	\$75,000	\$93,158	\$88,900	12
% Eligible for Bonus	75%	71%	67%	74%	57%	14
Median Annual Bonus	*	\$5,625	\$4,500	\$5,000	\$9,266	6
% Employment Contract	0%	14%	22%	25%	0%	14
% Severance Package	13%	14%	25%	28%	14%	14
Avg. Years with Practice	12	14	12	14	7	13
Avg. Years in Healthcare Industry	16	21	23	21	19	13

Summary & Conclusions



Five-Year Comparison per FTE Neurosurgeon - Overall

	2021 N	2022 N	2018	2019	2020	2021	2022
Median Collections	594	360	\$899,794	\$921,819	\$947,041	\$764,263	\$864,825
Median Compensation from Professional Services	615	354	\$604,235	\$585,699	\$615,324	\$604,880	\$641,964
Median Compensation from Covid-19 Stimulus	147	45	n/a	n/a	n/a	\$63,705	*
Ancillary Profits (Calculated)	n/a	n/a	\$132,721	\$164,301	\$179,219	\$131,215	\$200,205
Median Neurosurgeon Compensation	624	369	\$736,956	\$750,000	\$794,543	\$799,800	\$842,169

Five-Year Comparison per FTE Neurosurgeon - Physician-Owned

	2021 N	2022 N	2018	2019	2020	2021	2022
Median Collections	199	126	\$1,121,769	\$1,067,478	\$1,086,928	\$1,124,047	\$1,153,556
Median Compensation from Professional Services	195	113	\$563,494	\$522,328	\$570,660	\$579,596	\$521,410
Median Compensation from Covid-19 Stimulus	121	12	n/a	n/a	n/a	\$77,159	*
Ancillary Profits (Calculated)	n/a	n/a	\$325,754	\$351,120	\$307,611	\$389,311	\$415,173
Median Neurosurgeon Compensation	208	126	\$889,248	\$873,448	\$878,271	\$1,046,066	\$936,583

Five-Year Comparison per FTE Neurosurgeon – Hospital-Owned

	2021 N	2022 N	2018	2019	2020	2021	2022
Median Collections	66	51	\$809,603	\$735,164	\$774,800	\$585,031	\$844,172
Median Compensation from Professional Services	66	53	\$761,530	\$723,130	\$900,400	\$720,341	\$879,770
Median Compensation from Covid-19 Stimulus	9	13	n/a	n/a	n/a	\$15,385	*
Ancillary Profits (Calculated)	n/a	n/a	\$24,838	\$126,219	\$125,000	\$104,021	\$112,162
Median Neurosurgeon Compensation	66	53	\$786,368	\$849,349	\$1,025,400	\$839,747	\$991,932

Five-Year Comparison per FTE Neurosurgeon - Academic

	2021 N	2022 N	2018	2019	2020	2021	2022
Median Collections	329	183	\$727,688	\$798,414	\$789,495	\$642,641	\$736,403
Median Compensation from Professional Services	354	188	\$550,000	\$578,251	\$616,875	\$594,783	\$652,000
Median Compensation from Covid-19 Stimulus	17	20	n/a	n/a	n/a	\$54,439	*
Ancillary Profits (Calculated)	n/a	n/a	\$97,000	\$95,631	\$86,479	\$75,774	\$93,460
Median Neurosurgeon Compensation	358	190	\$647,000	\$673,882	\$703,354	\$724,996	\$745,460

Three-Year Comparison per FTE Neurosurgeon - Median

	2022 N	2020	2021	2022
Total Compensation	369	\$794,543	\$791,265	\$842,169
Professional Services	354	\$615,324	\$604,880	\$641,964
Call Pay	14	\$163,543	\$141,527	\$16,105
Ancillary Net Income: ASC	*	\$189,500	\$196,500	*
Ancillary Net Income: Imaging	*	\$58,963	\$65,000	*
Ancillary Net Income: PT or OT	36	\$25,350	*	*
Ancillary Net Income: Other	34	\$72,199	\$136,666	*
Research	46	\$39,385	\$39,004	\$36,579
Medical Directors	99	\$39,712	\$49,990	\$66,737
Teaching: Dept. Chair	8	\$244,161	\$251,467	\$226,407
Teaching: Dept. Professor	28	\$38,990	\$61,399	*
Teaching: Assoc. Professor	8	\$63,066	\$51,953	*
Teaching: Asst. Professor	9	\$52,800	\$50,418	*
Teaching: Instructor	*	\$60,000	*	*
COVID-19 Related	45	N/A	\$63,705	*
Other	154	\$60,537	\$72,505	\$73,386

Conclusions

- The mix of respondent variances by ownership type include:

	<u>2021:</u>	<u>2022:</u>
◦ Overall	100% (632)	100% (369)
◦ Physician-Owned	33% (208)	34% (126)
◦ Hospital-Owned	10% (66)	14% (53)
◦ Academic	57% (358)	52% (190)

- Due in part to this change in mix of respondents, as well as nationwide physician recruitment challenges median compensation per neurosurgeon increased from **\$791,265** in 2021 to **\$842,169** in 2022.

Conclusions

- Practices planning on recruiting new physicians and non-physicians increased from **73.17%** in 2018 to **86.21%** in 2022.
- The starting salary for graduating residents/new hires was substantially less than the starting salary for experienced hires:

	Graduating Residents:	Experienced Hires:
◦ Spine:	\$619,789 (▼15%)	\$707,385 (▲17%)
◦ Pediatric:	\$547,600 (▼ 2%)	\$592,500 (▲22%)
◦ Skull Based:	\$594,357 (▼14%)	\$702,286 (▲30%)
◦ Vascular/Interventional:	\$627,167 (▼ 12%)	\$1,114,455 (▲102%)

Conclusions

- Medical Directorship hourly rates increased from **2021** to **2022**:

	<u>2021</u>	<u>2022</u>
◦ Cranial/Brain Tumors Neurosurgery	\$326	\$344
◦ Spinal Neurosurgery	\$270	\$320
◦ Pediatric Neurosurgery	\$290	*
◦ Endovascular/ Vascular Neurosurgery	\$333	\$350
◦ Other	\$284	\$326

- Medical Directorship hourly requirements mostly increased from **2021** to **2022**:

	<u>2021</u>	<u>2022</u>
◦ Cranial/Brain Tumors Neurosurgery	183	208
◦ Spinal Neurosurgery	185	197
◦ Pediatric Neurosurgery	205	*
◦ Endovascular/ Vascular Neurosurgery	215	238
◦ Other	192	167

Conclusions

- Practices imposing limits on accepting Medicare patients have increased overall from **6.02%** in 2018 to **7.69%** in 2022. Of those that are imposing limits, **100%** reported they increased the limits in 2022.
- Practices imposing limits on accepting Medicaid patients have remained almost the same overall from **19.75%** in 2018 to **19.23%** in 2022. Of those that are imposing limits, **50%** reported they decreased the limits in 2022.

Conclusions

- Total support per FTE received from teaching hospitals has increased with **\$203,566** reported in 2021 to **\$233,949** in 2022. The resulting increase is **14.9%**.
- Total support per FTE received from medical schools increased from **\$33,177** reported in 2021 to **\$66,190** reported in 2022. This results in an increase of **99.5%**.

Conclusions

- Commercial reimbursement as a percentage of Medicare has steadily increased from **154%** in 2021 to **194%** in 2022.
- The average percentage of practice collections by source:
 - Medicare increased from **26.08%** in 2021 to **37.98%** in 2022.
 - Medicaid increased from **11.45%** in 2021 to **12.08%** in 2022.
 - Commercial payers decreased from **48.91%** in 2021 to **40.16%** in 2022.
 - Workers compensation decreased from **3.69%** in 2021 to **2.02%** in 2022.
 - Out-of-network increased from **4.92%** in 2021 to **6.88%** in 2022.

Conclusions

- The number of practices that cancelled third-party payer contracts has decreased from **11.11%** in 2018 to **7.69%** in 2022. This is an increase, however, from **4.00%** in 2021.
- The number of practices that have been approached by a health system increased from **12.77%** in 2021 to **17.39%** in 2022.
- The number of practices utilizing EMR systems remained constant at **96.00%**. Of those practices not currently using EMR systems, **40.00%** reported that they plan to implement an EMR system in 2022, a notable increase from 2021 when **16.67%** planned to implement an EMR system.

Conclusions

- **39.13%** of practices are participating in an ACO. This is an increase of **5.13%** from the 2021 amount.
- For those practices participating in an ACO, the percentage that received savings decreased from **60%** in 2021 to **43%** in 2022. This is in line with the **~40%** trends reported in 2017 – 2018. However, it is a significant decrease from the **~70%** trends reported in 2019-2021.
- Staff turnover rate for the past 12 months remained steady from **18.26%** in 2021 to **17.71%** in 2022.

Conclusions

- Median compensation per FTE neurosurgeon has increased for practice type in 2022. Hospital-owned practices saw a dramatic increase in 2022, while Physician-owned and Academic practices saw smaller, but still significant, increases. KSM notes that all participants were asked for compensation with and without COVID-19 numbers, however, there was no difference in the reported amounts in 2022.

	<u>2021</u> <i>(Includes COVID \$)</i>	<u>2021</u> <i>(Excludes COVID \$)</i>	<u>2022</u>
◦ Overall	\$799,800	\$781,435	\$842,169
◦ Physician-Owned	\$1,046,066	\$918,574	\$936,583
◦ Hospital-Owned	\$839,747	\$829,317	\$991,932
◦ Academic	\$724,996	\$724,720	\$745,460

Conclusions

- Median collections for professional services per neurosurgeon has continued to change over the last five years. The variances by ownership type include:

	<u>2018</u>	<u>2022</u>
◦ Overall	\$899,794	\$864,825
◦ Physician-Owned	\$1,121,769	\$1,153,556
◦ Hospital-Owned	\$809,603	\$844,172
◦ Academic	\$727,688	\$736,403

- Median WRVUS per neurosurgeon varied by ownership type over the last five years. Physician-owned and Academic increased slightly over four years, while Hospital-owned has decreased over four years. Hospital-owned increased over 2021, however. The variances by ownership type include:

	<u>2018</u>	<u>2022</u>
◦ Overall	9,817	9,858
◦ Physician-Owned	11,776	12,637
◦ Hospital-Owned	10,705	9,608
◦ Academic	7,704	8,360

Conclusions

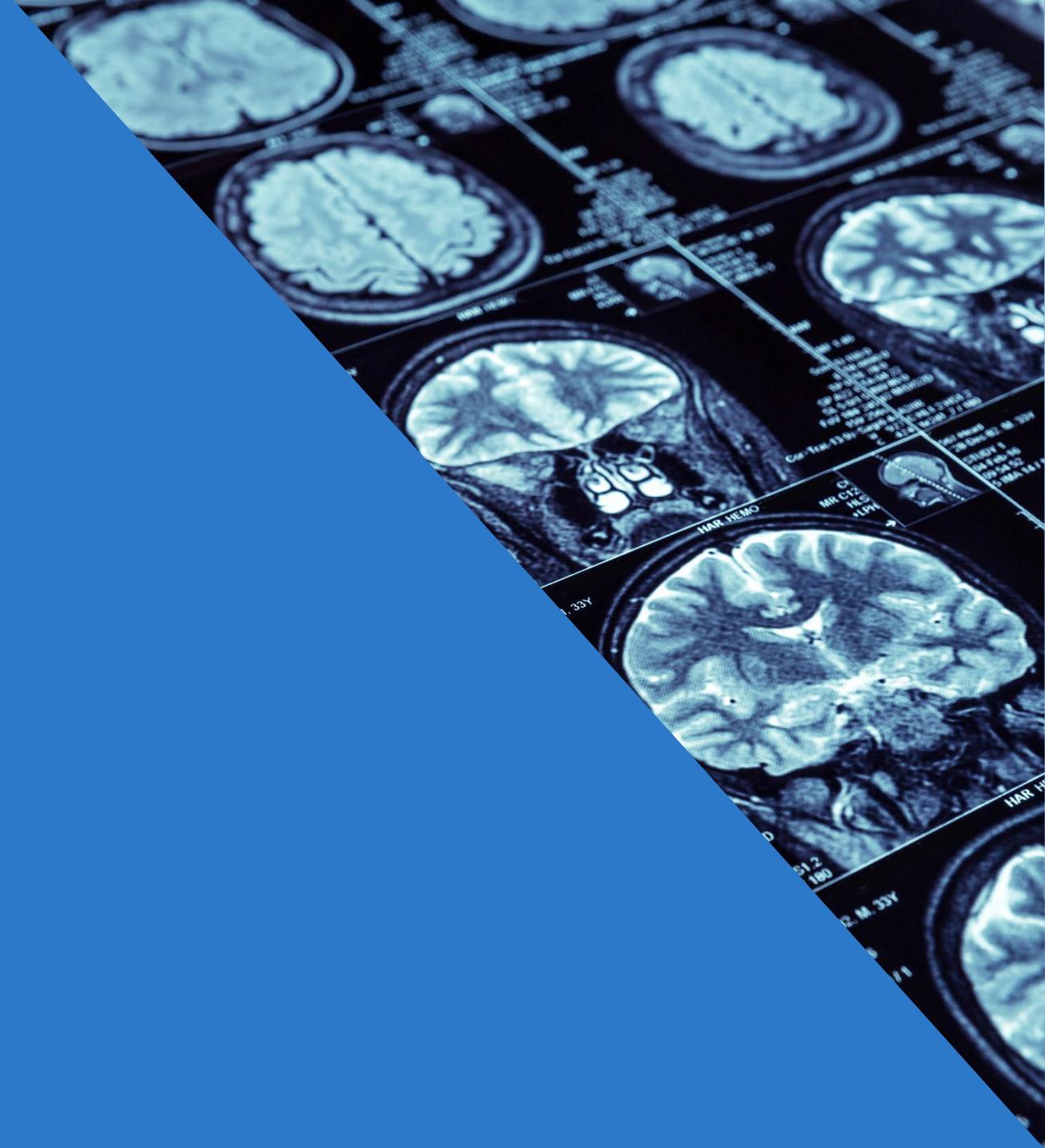
- Collections per WRVU has continued to change over the last five years. The variances by ownership type include:

	<u>2018</u>	<u>2022</u>
◦ Overall	\$83	\$85
◦ Physician-Owned	\$94	\$89
◦ Hospital-Owned	\$76	\$74
◦ Academic	\$78	\$84

- Compensation per WRVU has increased over the last five years. KSM notes respondents were asked to differentiate between compensation including and excluding COVID \$, however, there was no difference in the responses. The variances by ownership type include:

	<u>2018</u>	<u>2022</u>
◦ Overall	\$80	\$87
◦ Physician-Owned	\$78	\$79
◦ Hospital-Owned	\$81	\$91
◦ Academic	\$81	\$93

Appendix



Survey Participants

Akansas Children's Hospital - UAMS

Atrium Health Wake Forest Baptist Neurosurgery

Carolina Neurosurgery & Spine Associates

CHI Memorial Stroke & Neuroscience Center

Goodman Campbell Brain and Spine

Hartford Healthcare Medical Group

Highlands Neurosurgery, PC

Indiana University Department of Neurological Surgery

Lyerly Baptist Neurosurgery

Mayfield Brain & Spine

Metropolitan Neurosurgery, PA

Midwest Spine & Brain Institute

Neurosurgical & Spine Institute

New Jersey Pediatric Neuroscience Institute

New York Spine and Brain Surgery, UFPC

Norton Neuroscience Institute

Semmes Murphey Clinic

Springfield Neurological Institute LLC

Temecula Valley Neurosurgery

Texas Health Neurosurgery & Spine Specialist

Tulane Center for Clinical Neuroscience

Univ of Nebraska Medical Center - Department of Neurosurgery

University of Alabama at Birmingham, Department of Neurosurgery

University of California, Davis

University of Florida Lillian Wells Department of Neurosurgery

University of Miami - Neurological Surgery

University of Mississippi Medical Center

University of Washington, Dept of Neurological Surgery

UR Medicine Department of Neurosurgery

Washington University School of Medicine

Data Editing Process

- We use an editing process for the practice data to identify reporting errors and potential outliers in the data. Data determined to be outliers were either reviewed with the survey preparer for correction or excluded from the survey.
- All neurosurgeon compensation and statistics were normalized to report compensation on a 1.0 full-time equivalent (FTE).

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Thank you.

The information presented herein is general in nature and should not be acted upon without the advice of a professional.

