



MEDAXIOM

AN ACC COMPANY

2019



REPORT:

Cardiovascular
Provider Compensation
& Production Survey

FORWARD

I'm honored to introduce the seventh annual *Cardiovascular Provider Compensation and Production Survey* report. As a longtime MedAxiom member before joining as president, I know firsthand how valuable the findings in this report are for optimizing your organization and ultimately advancing cardiovascular care.

As the healthcare delivery system evolves, it's crucial that we understand how economics are affected. In recent years, we have increased the focus on populations and value (quality, cost, experience), and have added cardiology panel size and non-clinical compensation metrics to adapt to the changing marketplace. This year's report is more robust than ever with the addition of data for the advanced heart failure (HF) subspecialty designation.

We're also excited about the potential to marry our survey data with the National Cardiovascular Data Registry in future years, thanks to our new relationship with the American College of Cardiology.

Highlights from this year's report include:

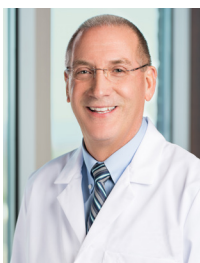
- Overall cardiology compensation reached the second highest total since 2012 and electrophysiologists are once again the top earners
- HF cardiologist compensation (reported for the first time) is 10 percent lower than general non-invasive compensation
- The income gap between private and integrated physicians shrank
- There are more cardiologists age 61 and over than ever before

Having a pulse on cardiovascular compensation and production data and trends enables you to make informed practice decisions and ensures you are on par with peer organizations. I encourage you to reach out to Joel or me with any questions or to discuss how these findings impact your organization.

Regards,

Gerald Blackwell, MD, MBA, FACC

Gerald Blackwell,
MD, MBA, FACC
MedAxiom President



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OVERVIEW

Methodology

Each spring MedAxiom surveys its membership on financial, staffing, productivity, compensation, and a number of demographic measures such as location, size of practice, ownership model, physician subspecialties, and so on. Data are submitted through online entry and via direct exports from practice management systems, along with other means.

Submissions are processed in MedAxiom's data warehouse and compiled into over 800 measures for analyses. Our members can then use MedAxiom's proprietary Business Intelligence tool, MedAxiom, to perform many different types of analyses. MedAxiom also extracts its own data to create reports for the membership, partnering organizations and the public.

The physician compensation and production data provided in this report were collected from 2008 to 2018. The published tables have been filtered to only include full-time physicians, unless otherwise indicated in the report.

MedAxiom Data Integrity: The Vetting Process

MedAxiom realized long ago the importance of well-vetted data and how errant information can destroy the value of a data set. With this recognition, MedAxiom now goes above and beyond in its pursuit of data integrity. The fact-checking process begins with a comparison of Work Relative Value Units (wRVUs) to those calculated by MedAxiom, based on the CPT upload provided by our data submitters. If there is a discrepancy, a more thorough review of the data is triggered. Additionally, an immediate comparison to the previous year is shown for any data manually entered online. This provides an instant check if there are large differences from year-to-year or there was a keying error.

Once data are loaded into the MedAxiom database, some of the critical measures relating to full-time equivalent (FTE) physicians and Advanced Practice Providers (APPs), as well as some elements of financial information, are verified to make sure that they are in alignment with the statistical norms of the rest of the database. A set of limits defined by a team of cardiovascular administration experts is the key to this step. All data points are examined against their own same-practice historical trend and against the practice's peer set to determine if the data point is outside a reasonable range. If a data point is determined to be an outlier, it is excluded from the data set until the practice is contacted and the data point can be verified. Once confirmed or corrected, the data point is allowed back into the data set where it can be viewed by other members in a de-identified fashion.

Data verified in this way are included in the overall calculations such as percentile, mean, median and standard deviation. All submitted data go through a rigorous process that relies on cross-checking, computer-automated vetting and review by human eyes, with follow-up phone calls and emails to data submitters when there are questionable results.

Having the right measures and high data integrity are what makes MedAxiom's report the most trusted in the cardiology industry.

Demographics

A total of 184 groups, representing 2,267 full-time cardiovascular physicians, completed this year's MedAccess survey (providing 2018 data). In addition there were 146 part-time physicians whose data were used in some of the findings, particularly the section on volume trends. The median size of the responding groups to this year's survey was 13 FTE physicians.



184 Groups

+



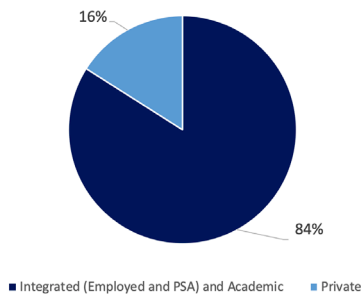
2,267 Full time physicians

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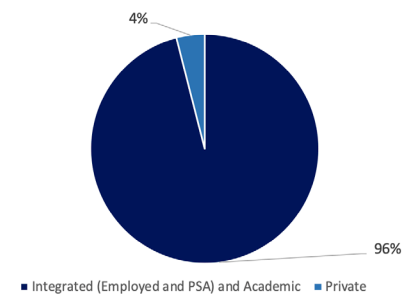


4,108 Total providers
(Physicians+APPs)

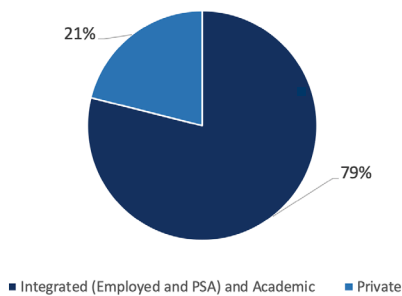
Cardiology: Practice Ownership Model



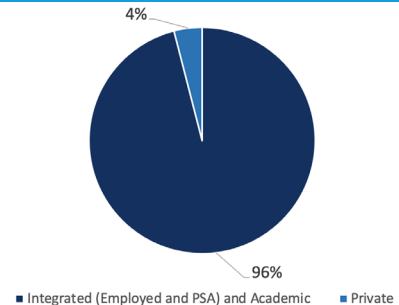
Surgery: Practice Ownership Model



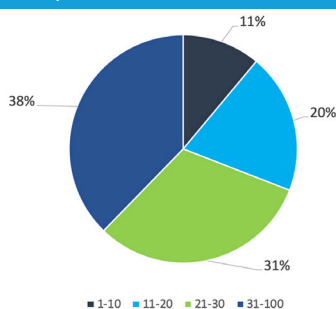
Cardiology by Physician: Practice Ownership Model



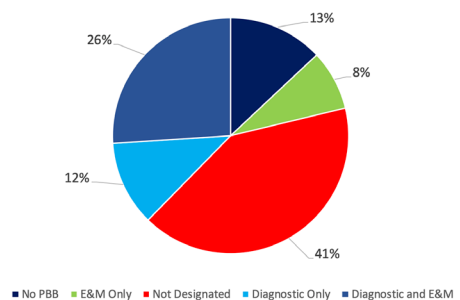
Surgery by Physician: Practice Ownership Model

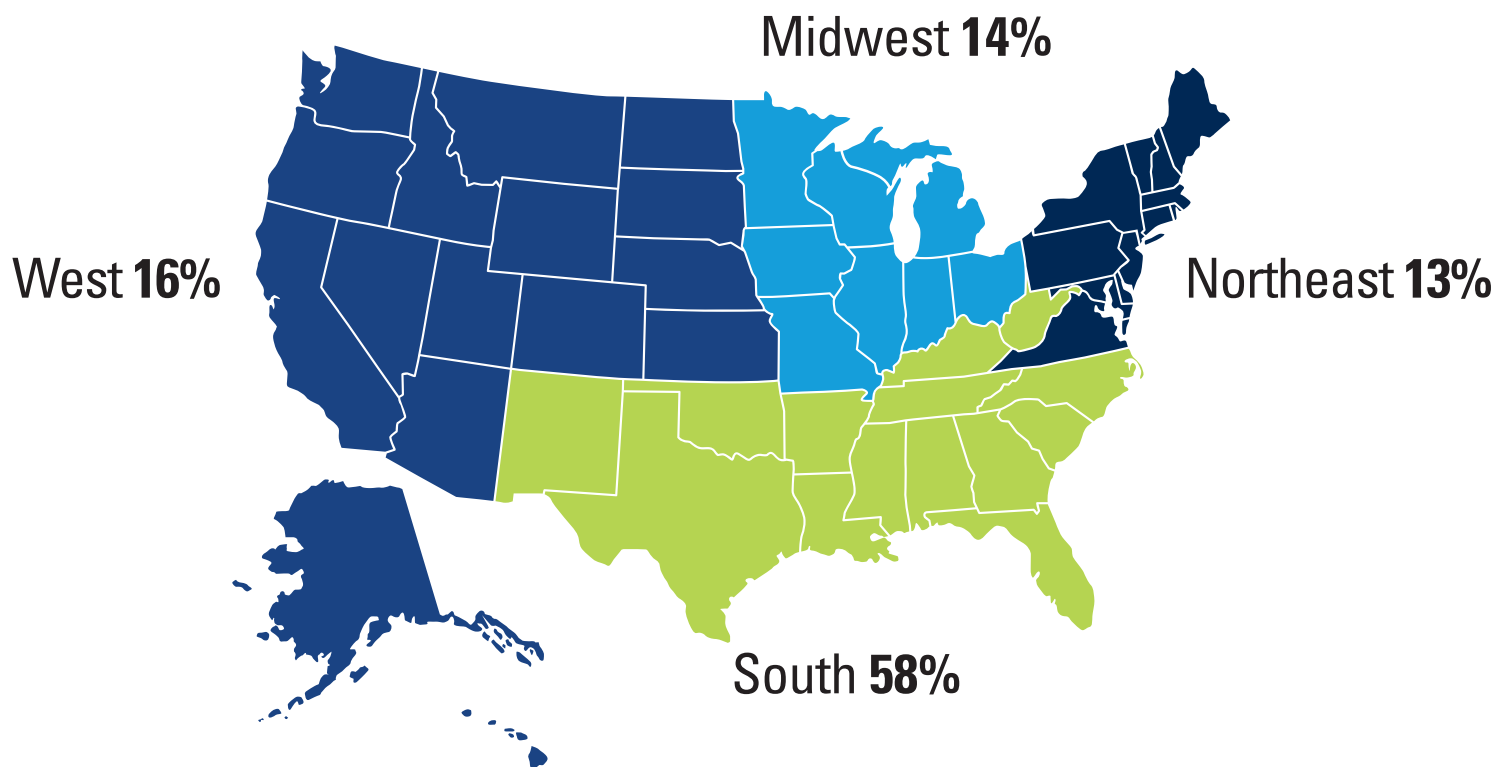


Cardiology Group Size by Providers

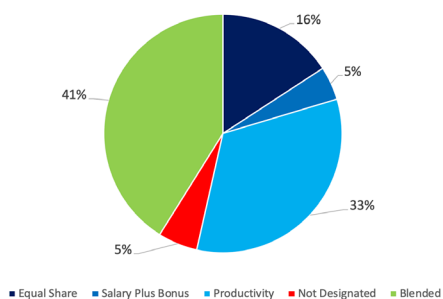


Provider Based Billing Breakdown (Cardiology)

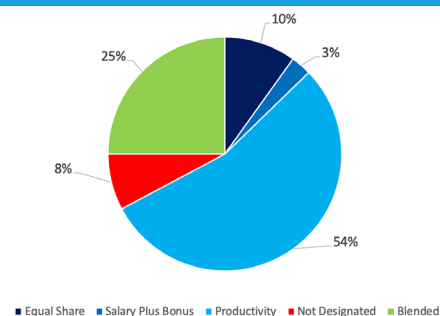




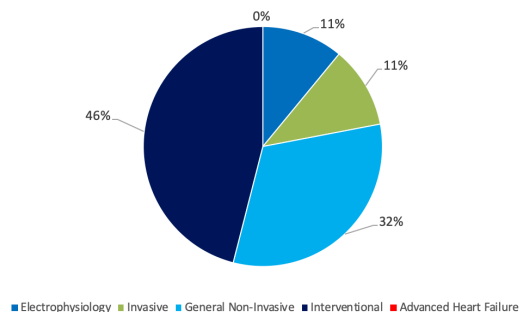
Cardiology Compensation Breakdown: Practice Compensation Model



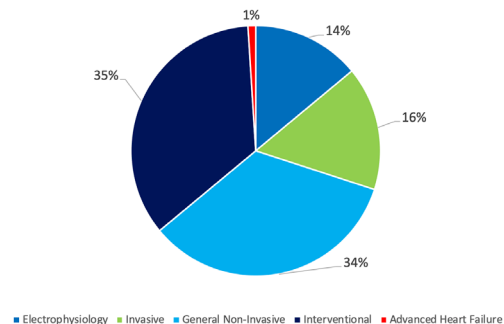
Surgery Compensation Breakdown: Practice Compensation Model



Cardiology Subspecialty Private



Cardiology Subspecialty Integrated



CARDIOLOGY COMPENSATION CONTINUES TO RISE

For the fifth year in a row and for the seventh year out of ten, overall cardiology compensation increased over the previous year,

with the median total compensation per FTE now sitting at \$577,329 (Figure 1). This, despite a 2018 MedAxiom member poll prediction that incomes would *decrease*. Nearly 70 percent of respondents predicted that total compensation for cardiologists would go down in 2019 (based on 2018 data). The percentage of members who predicted a decline was nearly identical whether they were employed or private practice cardiologists.

Yet despite these premonitions, overall total cardiology compensation ticked up more than 3 percent from last year. Employed cardiologists effectively held firm with the previous year while cardiologists in private groups jumped up 8 percent (Figure 2). Although this latter increase is probably due in part to some level of survey bias (the number of respondents, which groups respond this year vs. last year, etc.), there are two trends that give the data credibility.

Revenue From Hospital Contracts

Figure 3 shows total revenue for private cardiology groups, trending both clinical revenue and total revenue per FTE cardiologist. Both lines show increasing paths and in 2018 there was a nearly \$42,000 delta per FTE between clinical and total revenue. This gap was even wider in previous years. The difference in these numbers represents the innovative ways that private cardiology groups are making ends meet.

Our field knowledge indicates that the revenue differential is primarily due to hospital contracts for call, co-management, directorships or other payments, as well as retail sales of pharmacy products, dietary resources and other products. These other revenue streams have been so effective that for 2018, the gap between integrated and private physician total compensation has narrowed to just 3.5 percent, the lowest we've ever reported.

Figure 1: Median Cardiology Compensation

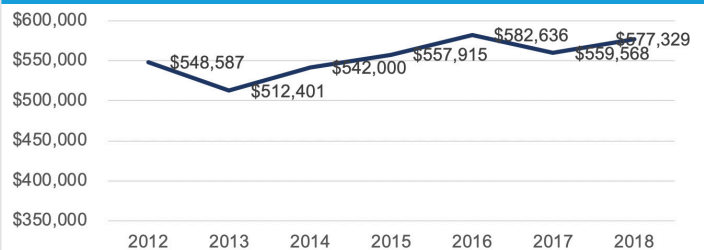


Figure 2: Median Total Compensation by Ownership Model

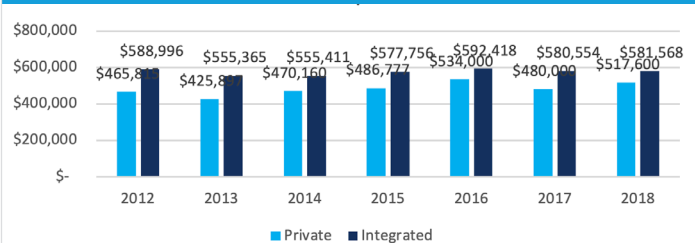
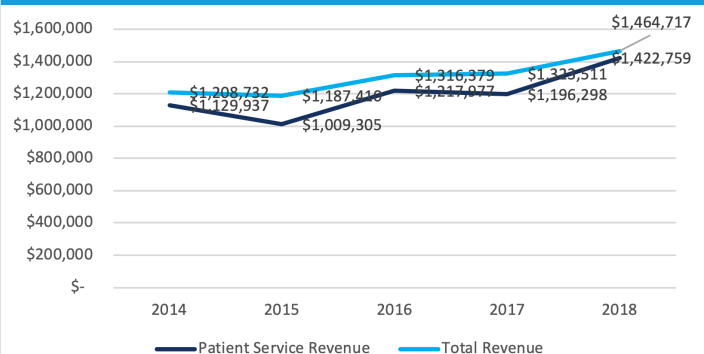


Figure 3: Revenue per FTE Private Cardiologist



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TO SKIP TO
SURVEY RESULTS](#)

Supply and Demand

Like all of America, the cardiology workforce is aging. 2018 data indicate that overall one in four cardiologists (27 percent – see Survey Results [Table 5](#) on [page 16](#)) is now over the age of 61. While this age doesn't necessarily indicate that retirement is imminent, it does suggest a section of the workforce that will either slow down and/or discontinue practicing altogether within a matter of years.

When going a level deeper within each subspecialty area, this age distribution hits interventional and general/non-invasive cardiologists the hardest, with 29 percent and 31 percent of physicians over the age of 61, respectively ([Figure 4](#)). Part of the reason for the higher age distribution in the non-invasive cohort is that often cardiologists who discontinue providing invasive services will be reclassified as non-invasive. Leaving the catheterization (cath) lab and no longer wearing lead or being exposed to radiation can prolong clinical careers, and many opt for this path.

As cardiologists age, production – when measured by wRVUs – declines. While the overall median wRVU production per FTE cardiologist is 9,393, the median for physicians over the age of 61 is 7,544 per FTE. When you consider a group of 16 cardiologists with 25 percent over the age of 61, this production differential is equal to one missing FTE of wRVUs ([Figure 5](#)).

Unfortunately, the pipeline of new cardiologists does not appear adequate to replenish those transitioning out of the cath lab. [Figure 6](#) attempts to estimate the national cardiology workforce by considering the number of departures and the number of cardiologists coming out of fellowship. As [Figure 6](#) illustrates, the shortfall is significant. Even if these estimates are off considerably, there is a high likelihood that there won't be a surplus of cardiologists any time soon.

Corroborating this theory is a report released by the Association of American Medical Colleges (AAMC), *The Complexities of Physician Supply and Demand Projections 2016 – 2030*. This research shows that the U.S. will experience a shortage of 42,600 to 121,300 physicians in all specialties within the next 10 years. More than a third of this paucity will be in primary care, the expected relief valve for chronic disease management, which includes several cardiovascular conditions.

Figure 4: Percent Over 61 Years Old

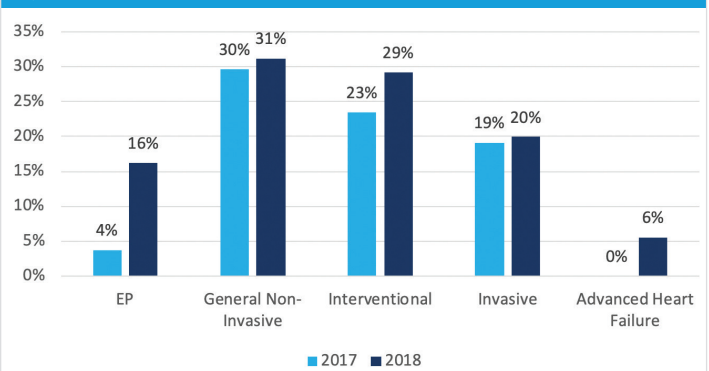


Figure 5: Age Illustration

	wRVU
Overall Median	9,393
Over age 61 Median	7,544
Difference per FTE	1,849
Physicians Over age 61 (16 x 25 percent)	4
Missing wRVU Production	7,396

Figure 6: US Cardiology Populations

Practicing Cardiologist	1,700
Over age of 61	3,400
Estimated Annual Departures	(850)
Current Total US Fellows	850
Annual Number Entering Workforce	255
Net Annual Workforce Impact	(595)

[CLICK HERE](#)

The Complexities of Physician Supply and Demand Projections 2016 – 2030

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TO SKIP TO SURVEY RESULTS

At the same time, the AAMC research notes there will be increased demand for physician services due to the growing U.S. population (projected at 11 percent from 2016 to 2026) and growing percentage of the population over the age of 65 (which will hit 50 percent by 2030). In addition, the obesity trend in the U.S. has slowed but not reversed with a projected increase in overall chronic disease prevalence, according to Centers for Disease Control and Prevention estimates.

Although both of the preceding trends are plausible contributors to the continued year-over-year increase in cardiologist compensation, supply and demand is the stronger driver. Cardiology services continue to expand and are still well rewarded in the contemporary fee-for-service economy. At the same time, the number of providers is, at best, remaining stagnant. Any administrator trying to recruit a new cardiologist can attest to that. These counter-forcing trends have put continued upward pressure on incomes.

Looking ahead, we predict this state of affairs will remain the same for quite some time – probably the better part of a decade. After all, we don't turn out new cardiologists in just a couple months. Perhaps artificial intelligence (AI) will alleviate some of this pressure, as Eric Topol, MD, predicts in his new book, *Deep Medicine*. However, Topol points out that AI likely won't have a major impact for at least 10 years.

In the meantime, it's probably time to stop predicting the decline of overall cardiology compensation. Given the economics of supply and demand, the ongoing trend of compensation growth is pretty solid.



“ I find the MedAxiom Cardiovascular Provider Compensation & Production Survey Report to be very valuable as we review trends and see how our group's compensation and production levels measure up with our peers. It provides us with a comprehensive resource as we plan and make decisions for the upcoming years. ”

JONATHAN FIALKOW, MD
CHIEF POPULATION OFFICER
BAPTIST HEALTH SOUTH FLORIDA
CORAL GABLES, FL

Moonlighters Provide Vital Solutions for Workforce Challenges in Cardiovascular Care

As a healthcare administrator and leader in cardiovascular care, how can you ensure that all of your staff and patient needs are covered, especially when the market for cardiologists is tougher and more competitive than ever before?



If you are responsible for recruiting and staffing in your cardiology department, you know that there are countless challenges you face, particularly with respect to physician staffing.

MedAxiom's 2019 Cardiovascular Provider Compensation & Production Survey reveals there are more cardiologists over age 60 than ever before. As the physician population ages, this leads to an increase in the rate of physicians retiring, increased turnover, and more physicians who prefer to slow down their call coverage volume. Wouldn't it be great to be able to offer your loyal, more experienced physicians a better quality of life and allow them to slow down their call coverage after all of the years they've served the patient community?

Additionally, MedAxiom's report reveals that the income gap has narrowed between integrated/employed physicians and those in private practice. As income becomes more comparable across the board and among various types of practice settings, other factors will become more significant in physicians' career decisions, such as quality of life, work/life balance, hours, and call schedule rotation.

Implementing a team of physician moonlighters into your cardiology service line can alleviate many of the staffing and scheduling challenges faced by administrators and leaders of cardiovascular care.

Moonlighting vs. Traditional Locums

DIFFERENT STAFFING APPROACHES TO ADDRESS SEPARATE CHALLENGES

It's a common misconception to confuse moonlighting coverage with locum tenens, but they are not one in the same. Most healthcare leaders are familiar with traditional "locums" coverage. Traditional locums agencies utilize a rotating bench of traveling doctors to fill short-term assignments (with a definitive end-date) that are either full-time or part-time hours. Locums is great for providing coverage during a physician vacation, maternity leave, etc. While locums (or travel doctors) do meet some important staffing needs, incorporating moonlighters into your physician team provides additional benefits to your full-time physician staff that locums cannot.

Moonlighting provides a more long-term approach than locum tenens. Moonlighting assignments often do not have a defined end-date because moonlighting physicians integrate with the full-time physician staff indefinitely, on a part-time schedule, such as night and weekend coverage, for example.

Integrating part-time physicians with your full-time physician staff for the long-term creates a synergy that is not typically found with short-term travel doctors. Utilizing moonlighting physicians addresses different staffing needs and solves workforce challenges that are often not alleviated by locums staffing alone. As opposed to traveling doctors, physician moonlighters are often fellows who are currently completing their fellowship training nearby, and therefore are more easily accessible for a long-term rotation of weekend or night shifts.

Due to the more long-term nature of moonlighting assignments, as compared to locum tenens assignments, the vetting of physicians is especially critical for success. Effective recruiting and credentialing teams screen and vet each physician moonlighter to ensure that he or she will fit in with the staff, acclimate to the work environment, and provide the highest quality of care.



Dan Bensimhon, MD
CEO & Founder of
Moonlighting Solutions

Onsite Physician Moonlighting – Nights and Weekends

One of the most common ways that moonlighting physicians benefit health systems is by providing onsite night and weekend coverage. For example, giving your full-time physicians just one or two additional weekends off during the month, and/or giving them nights off, allows staff physicians to rest and recharge, enjoy a more conducive work-life balance, and in turn provide better care.

Moonlighting also allows aging physicians to slow down their call rotation duties, without impacting their physician colleagues on staff. A heavy call rotation negatively impacts retention and recruitment. Moonlighters alleviate call burden for your staff physicians, extending their careers, boosting productivity, and improving retention and recruiting success rates.

For optimum coverage and quality of care, a comprehensive staffing strategy should ideally include an integrated team of long-term, part-time moonlighting physicians along with more short-term locum tenens physicians.

STEMI Call

Providing coverage for STEMI call is one area where implementing moonlighters can make a relatively quick and significant impact to cardiovascular care. Utilizing moonlighters to assist staff physicians in the STEMI call rotation increases productivity, improves care, and thus improves the lives of staff cardiologists. With the demanding nature of call duties for interventional cardiologists- combined with widespread shortages of these physicians - implementing moonlighters can help systems manage their cath lab volumes without the expense of hiring additional FTE cardiologists. Moonlighting coverage can prevent loss of patient volume caused by avoidable patient referrals out to other systems for cardiovascular specialty care.

Telehealth and Virtual Options

Providing remote care through telehealth technology in the cardiology department can help fill in coverage gaps during a physician shortage or help manage a surge in patient volume. Telemedicine allows you to extend specialists' reach to rural populations and/or medically underserved patient populations.

Virtual specialty clinics are a valuable telehealth resource for providing specialty care when a cardiologist is not available to be on-site. Virtual specialty clinic patients simply schedule visits with a remote cardiologist as if he or she is on-staff and on-site. When it's time for the appointment, the patient goes to the designated office (a primary care practice, or other office space within your system) where tests can be conducted by clinicians at the office and communicated to the virtual cardiologist scheduled for appointments for that day.

For example, Moonlighting Solutions works with Avera Health to provide specialty care to Indian Health Service patients via telemedicine. Many patients treated by virtual moonlighters have never been treated by a specialist before. Not only does this benefit the patient population, it benefits the health system. Most physicians report that providing virtual care to medically underserved populations is extremely rewarding. They also like that they can provide this invaluable care without traveling or relocating.

Remote reading of cardiology test results (such as ECHOs and EKGs) is another way that virtual care can supplement your cardiology department and help support your full-time cardiologists.

Permanent Placement

One of the greatest benefits of utilizing moonlighters as part of your staffing strategy is the ability to work with the physician moonlighters over an extended time. The moonlighter works on a part-time, temporary (but long-term) basis which can potentially lead to a role as a permanent staff physician.

Unlike locums physicians working a short-term assignment, moonlighters integrate as a part of the physician team over a longer period, enabling leadership and management to determine how well the physician works with existing staff physicians, and with other clinicians and administrative staff too. Likewise, the physician moonlighter, who is often a fellow approaching their first full-time career out of training, can experience the work environment, learn the protocols, and get acquainted with the staff first-hand, over time. This eliminates a great deal of uncertainty in the hiring process and improves retention rates for new hires.

Cardiology is one of the top specialties for physician moonlighting. Cardiologists work the second-highest volume of hours and shifts as moonlighters, second only to hospitalists.

Conclusion

Moonlighting Solutions is the nation's first firm specializing in providing high-quality, fully-vetted, part-time, long-term physician call coverage nationwide. The firm is physician-owned and -operated by CEO and founder, Dan Bensimhon MD. Dr. Bensimhon is a full-time cardiologist and heart failure specialist who founded the company after his own personal experience as a moonlighter in North Carolina while completing his fellowship training at Duke. As a practicing cardiologist, Dr. Bensimhon understands the nuances of cardiovascular care and the unique coverage needs faced by the cardiology team.

So it's no surprise that cardiology makes up the second-highest volume of hours and shifts worked via Moonlighting Solutions, second only to hospitalist coverage. Other top moonlighting specialties include neurology, pulmonary medicine/critical care, and neurology.

As the exclusive MedAxiom partner for physician staffing, Moonlighting Solutions can devise a comprehensive strategy that best meets the unique coverage needs of your cardiovascular department. This could include a combination of various types of coverage from short-term to long-term, part-time to full-time, and temporary to permanent. Additionally, Moonlighting Solutions handles recruiting, scheduling, credentialing, and licensing in a professional, thorough, and timely manner, to implement your physician moonlighters effectively and efficiently.

To discuss your physician call coverage needs, please contact Mike Guenther, VP of Key Accounts, to learn more. Mike may be reached via email at mike.guenther@moonlightingsolutions.com, or by phone: (908) 783-0678.

SURVEY RESULTS – CARDIOLOGY

Total Compensation

The 2018 data shown in **Figure 1** show the median total cardiology compensation per FTE nudged back up in 2018 to \$577,329, the second highest total since 2012. Both private and integrated physicians enjoyed this increase, with the gap between the two cohorts closing to one of its lowest levels (11 percent) since the integration wave of cardiology began in 2008 (**Figure 2**). In terms of real dollars, private cardiologists earn just under \$65,000 less per FTE than their peers in integrated settings (hospital or health system employment or lease). While this gap is significant, it has narrowed by half since its peak in 2013 of nearly \$130,000 per FTE.

Turning now to the subspecialty differences, **Table 1** shows that electrophysiology (EP) has once again come out as the top earner in cardiology, with median total compensation of \$629,641 per FTE. This is just ahead of interventional cardiology at median total compensation of \$621,090, less than 1.5 percent below EP. In the 2018 data, general non-invasive physicians continue to be the lowest compensated of the traditional cardiology subspecialties, with median total compensation of \$493,733.

Continuing its tradition of evolving with the changing marketplace, several years ago MedAxiom began collecting data for the new subspecialty of advanced HF. This is the first year we have had a response rate significant enough to publish. In its inaugural year, HF cardiologists debut with median total compensation of \$441,845 per FTE, 10 percent lower than general non-invasive peers.

Heart failure cardiologist compensation (reported for the first time) is 10 percent lower than general non-invasive compensation.

2018 cardiology compensation was the second highest total since 2012 and electrophysiologists are once again the top earners.

Figure 1: Median Cardiology Compensation

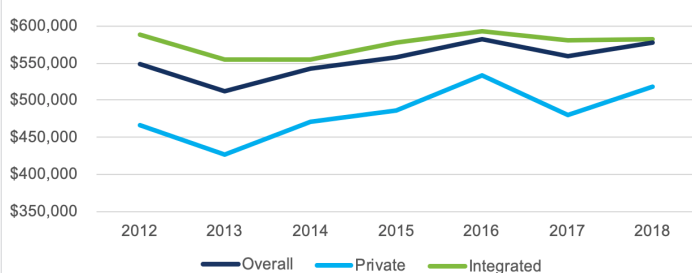


Figure 2: Median Total Compensation by Ownership Model

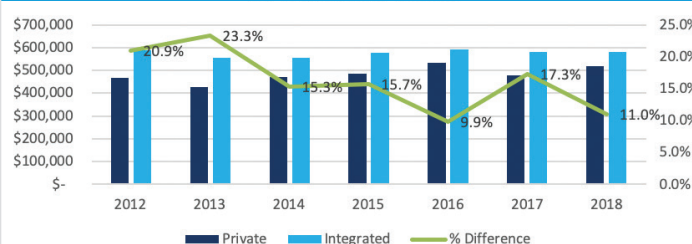


Table 1: Median Total Compensation by Subspecialty

	2014	2015	2016	2017	2018
Electrophysiology	\$554,958	\$572,066	\$607,336	\$598,704	\$629,641
Invasive	\$542,000	\$560,604	\$571,010	\$550,789	\$583,211
General Non-Invasive	\$489,776	\$489,701	\$531,204	\$480,000	\$493,733
Interventional	\$563,485	\$587,500	\$606,681	\$600,000	\$621,090
Advanced Heart Failure	n/a	n/a	n/a	n/a	\$441,845

It will be interesting to watch both of these cardiology subspecialties – HF and general non-invasive – to see if incomes trend upward, as feedback from the MedAxiom community suggests both are in high demand but there are few candidates available. Adding to this prediction, a recent conversation with a cardiology fellowship program director noted that very few fellows leave as generalists, with the vast majority choosing to continue on into one of the more advanced super subspecialties. This will only exacerbate the shortage for the cardiology generalist.

In its first year in the survey, HF physicians comprise just 2 percent of the cardiology workforce (**Figure 3**), with interventional doctors making up the largest segment at nearly 40 percent. Perhaps not surprisingly, all of the HF cardiologists reported in the survey are within the integrated ownership model. These physicians tend to generate fewer wRVUs which in turn leads to fewer cash collections or professional revenue. Given the already lower incomes of the private cohort, supporting this resource within a private practice appears to be untenable.

The region of the country in which a cardiologist chooses to practice does factor into his/her ultimate compensation (**Figure 4**). In general, physicians in the Northeast earn substantially less (nearly 18 percent) than cardiologists in the South – the top earners of all four quadrants with median total compensation of \$609,393 per FTE. The South knocked the Midwest out of the top median total compensation spot in 2014 and has not relinquished the podium since.

Reasons why the South leads in total compensation have been explored in previous surveys and include factors such as higher incidences of cardiac disease within the general population, fewer physicians per 100,000 population (including cardiologists), and a dearth of primary care physicians.

A major driver for the Northeast's last place finish for total compensation is that it led all regions in its penetration of private groups, with nearly 40 percent of reporting physicians being part of a private group ownership model (**Figure 5**). As noted earlier, these physicians overall earn over 10 percent less than those integrated with a hospital or health system. By contrast, the Midwest has only 4 percent of reporting groups in the private model.

Figure 3: Subspecialty Mix in Cardiology

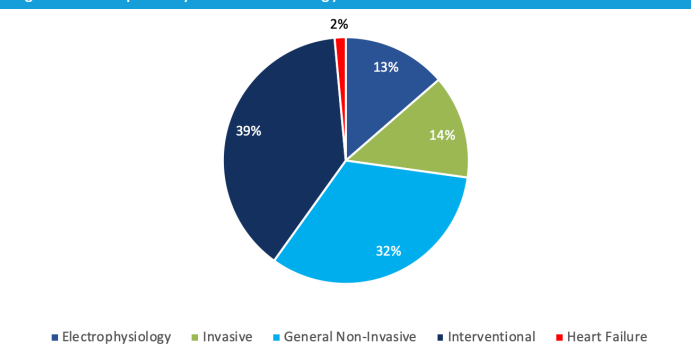


Figure 4: Median Total Compensation by Geographic Region

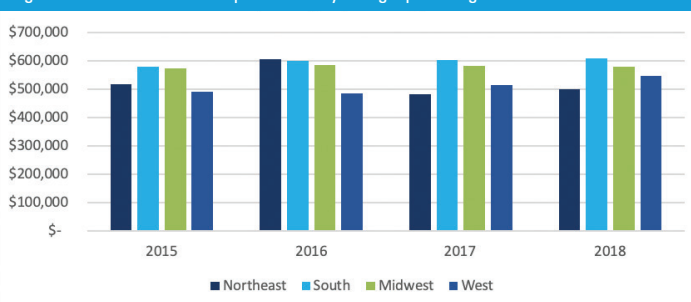
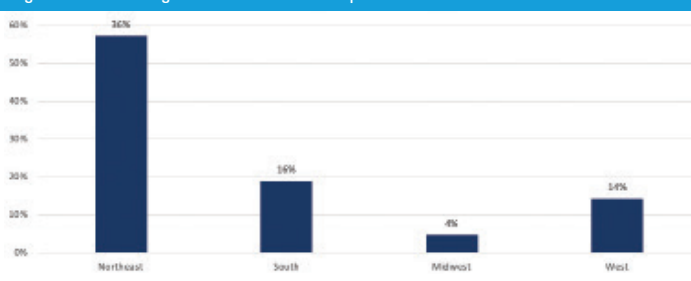


Figure 5: Percentage of Private Ownership Model



In general, physicians in the Northeast earn substantially less (nearly 18 percent) than cardiologists in the South – the top earners of all four quadrants.

Figure 6: Median wRVU Production per FTE

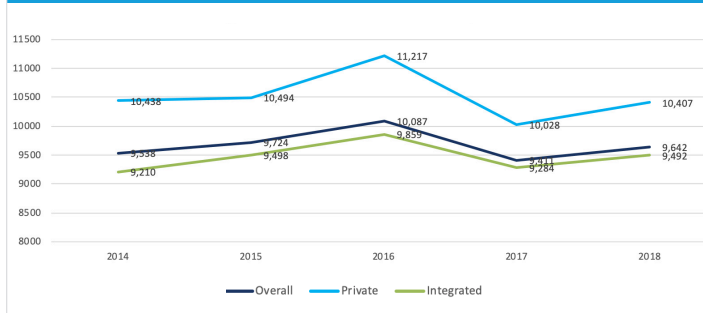


Figure 7: Subspecialty Mix - Private Ownership

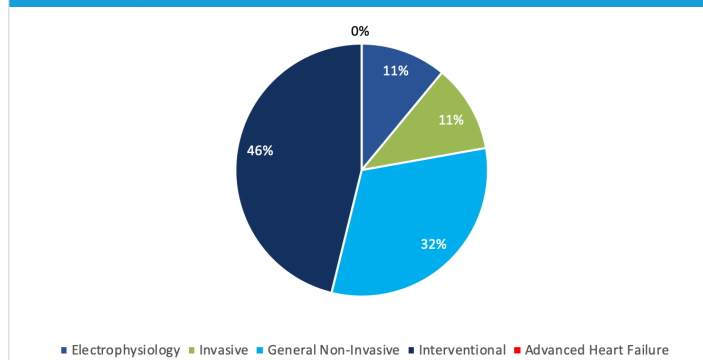


Figure 8: Subspecialty Mix - Integrated Ownership

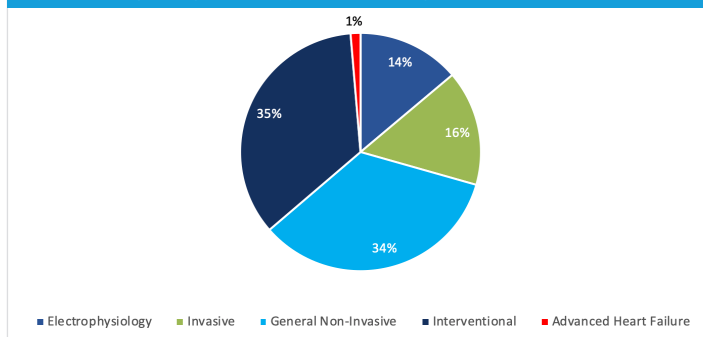


Table 2: Median wRVU Production per FTE

	2015	2016	2017	2018
Electrophysiology	11,637	12,902	11,570	11,696
Invasive	9,136	9,197	8,671	9,376
General Non-Invasive	8,013	8,826	7,992	8,241
Interventional	10,446	10,678	10,603	10,537
Advanced Heart Failure	n/a	n/a	n/a	4,990

Production

Overall cardiology production, as measured by the wRVU, has remained quite stable over the past five years, with 2018 median wRVU production at nearly the exact same level reported in 2013. Private cardiologists continue to outpace those in integrated models in terms of overall wRVU production levels with each cohort following the same trending patterns (Figure 6). Although the production gap between private and integrated cardiologists has varied over the years, it has hovered around a 10 percent differential – which syncs up very close with the total compensation difference.

The differences in production levels between the ownership cohorts can be partly explained by their respective subspecialty mixes. Figure 7 shows the subspecialty mix for the private ownership groups, while Figure 8 illustrates the same for integrated groups. What jumps out is that nearly half (46 percent) of the physicians in private groups are interventional. When you add in EP, another procedure heavy subspecialty, that ratio increases to nearly 60 percent. By contrast these two subspecialties represent less than half of physicians in integrated groups. EP and interventional top the wRVU production pyramid, helping to explain the private group production advantage.

Table 2 shows that EP continues to produce the most median wRVUs per FTE physician (11,696 per FTE) with interventional cardiologists in the second spot (10,537 wRVUs per FTE). The newly added subspecialty of HF shows median wRVU production of just under 5,000 per FTE. This is not surprising given the clinical role that these physicians provide, concentrating on a patient population that is very sick and requires more time. In addition, HF physicians tend to focus on seeing patients – the Evaluation and Management (E&M) spectrum of CPT codes – not on performing procedures.

Overall cardiology production has remained quite stable over the past five years. Private cardiologists continue to outpace those in integrated models in terms of overall wRVU production levels.

A physician spending most of his or her day in the office seeing patients will tend to generate significantly fewer wRVUs than someone spending the day in the cath lab. This is demonstrated in [Figure 9](#) which shows that HF physicians generate the highest percentage (nearly two-thirds) of their wRVUs from these patient visit codes (E&M) than any other specialty. By stark contrast, EP physicians generate just 32 percent of their wRVUs from E&M. As noted above, HF patients tend to take more physician time than the general cardiology population, which when coupled with the higher percentage of wRVUs from E&M, explains the delta in wRVU production between HF and general non-invasive cardiologists.

Although not the jurisdiction of this survey, the phenomenon described in the preceding paragraphs makes fair market analyses challenging for the HF physician population. At the end of the day, these physicians are cardiologists, with an increasingly large subset having an additional year of fellowship beyond general cardiology. Additionally, this resource is quite scarce, as noted earlier, which under basic economics (supply vs. demand) tends to push up wages.

A current staple of the fair market testing arsenal is to compare imputed compensation per wRVU rates. When you combine even a modest cardiology total compensation amount with median wRVU production that is 60 percent that of the next highest subspecialty ([Table 2](#)), heart failure physicians can appear well above market norms for this imputed metric. At the same time, these physicians relieve other cardiologists from a population of patients that tends to be sicker and take more physician time. All of these factors will converge to create a fair market value for these subspecialists.

This imputed – or calculated – total compensation per wRVU will be reviewed in more depth below.

As with total compensation, geography plays a role with wRVU production as well. [Table 3](#) shows median wRVU production by geographic quadrant, with the South once again coming out on top at 10,744 median wRVUs per FTE. This region is nearly 20 percent higher than the next closest (West) and is over 2,000 wRVUs per FTE higher than the lowest region (Midwest). To put this in perspective hypothetically, a group in the South that needs to perform 150,000 wRVUs requires 14 cardiologists using the median production. By contrast, a group in the Midwest needs 18 cardiologists to generate these same 150,000 wRVUs ([Figure 10](#)).

Figure 9: Median Percentage of wRVUs from E&M

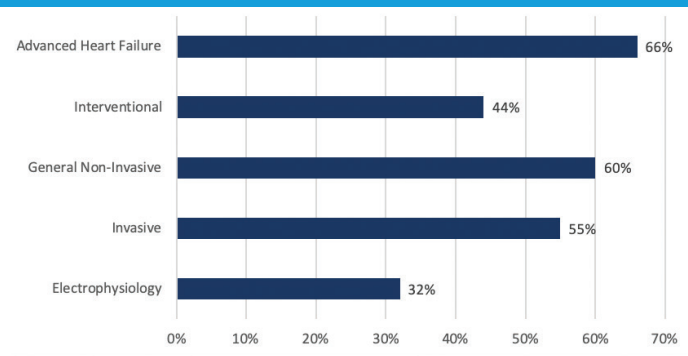
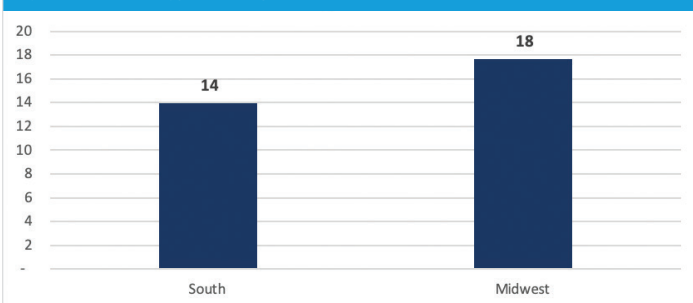


Table 3: Median wRVU Production per FTE

	2015	2016	2017	2018
Northeast	8,195	9,288	8,559	8,832
South	10,679	11,211	10,877	10,744
Midwest	9,198	9,655	9,233	8,484
West	8,580	8,831	8,167	9,106

Figure 10: Cardiology FTEs Required for 150,000 wRVUs



The South once again comes out on top at 10,744 median wRVUs per FTE. This region is nearly 20 percent higher than the next closest (West) and is over 2,000 wRVUs per FTE higher than the lowest region (Midwest).

Compensation per wRVU

As the name implies, compensation per wRVU is a calculated metric of total compensation (see “Glossary” [page 36](#)) divided by wRVU production. Note that this rate is not reported to MedAxium by the survey respondents; it is calculated as described previously. This metric is very often misunderstood as a contracted rate, particularly for integrated physicians, which it is not. For a more in-depth review of compensation per wRVU please refer to [Compensation per wRVU: Myths & Reality](#).

CLICK HERE

[Compensation per wRVU:
Myths & Reality](#)

Interestingly, at the extremes there is an inverse relationship between compensation per wRVU and wRVU production, as shown in [Figure 11](#). EP is both the highest wRVU producing subspecialty and the highest earner ([Table 1, page 11](#)), yet earns the lowest compensation per wRVU. By contrast, HF is at the bottom of both production and total compensation, but is at the top of compensation per wRVU, with a median calculated rate of \$91.64. Again, this calculated rate has nothing to do with a contracted rate; it is simply total compensation divided by total production.

The comparison of ownership models for median compensation per wRVU is shown in [Table 4](#). As pointed out in the preceding sections, private physicians earn less than their integrated peers, yet outproduce them in terms of wRVUs. The result is lower calculated compensation per wRVU across every subspecialty when compared to integrated physicians. Of note in the integrated subspecialties is how tight this metric is for invasive, general non-invasive and interventional physicians, with only a 1 percent difference from highest to lowest.

Over the last five years, overall median cardiology compensation per wRVU has trended up from \$53.47 in 2014 to \$57.33 per wRVU in 2018 ([Figure 12](#)).

Figure 11: Median Compensation per wRVU & wRVU Production

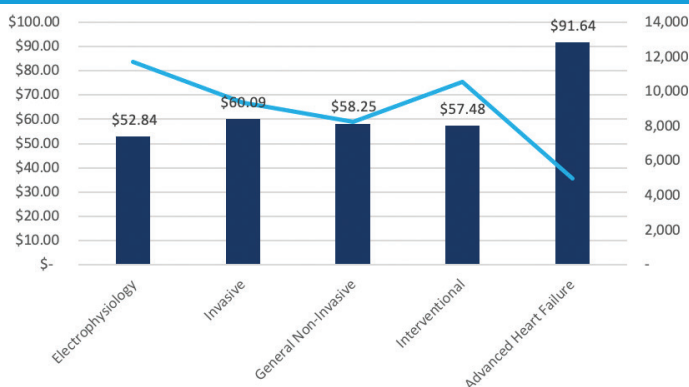


Table 4: Median Compensation per wRVU by Ownership

	Private	Integrated
Electrophysiology	\$39.91	\$54.92
Invasive	\$42.31	\$62.23
General Non-Invasive	\$41.75	\$61.30
Interventional	\$42.92	\$61.71
Advanced Heart Failure	n/a	\$95.18

Figure 12: Trend in Median Compensation per wRVU

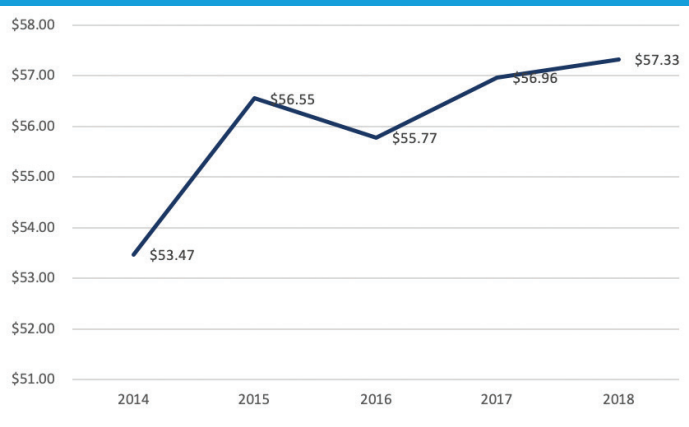


Table 5: Cardiology Age Distribution

	2017	2018
Age 30 - 40	17%	16%
Age 41 - 50	27%	28%
Age 51 - 60	32%	29%
Age 61 & up	24%	27%

Table 6: Percent Age 61 & Older

	2017	2018
EP	4%	16%
General Non-Invasive	30%	31%
Interventional	23%	29%
Invasive	19%	20%
Advanced Heart Failure	n/a	6%

The Role of Age, Status and Gender in the Cardiology Workforce

Like much of America, the cardiology workforce continues to age. The percentage of cardiologists age 61 and older ticked up in 2018, hitting its highest level ever recorded by MedAxiom at 27 percent (**Table 5**). General non-invasive physicians have the highest portion of cardiologists over the age of 61 at 31 percent, with interventional coming in a close second at 29 percent (**Table 6**). It is not all that surprising that the general non-invasive category would top this category as interventional physicians who leave the cath lab in their later years, but still practice, tend to be reclassified as general non-invasive.

The newest subspecialty classification, HF, had the lowest percentage of its workforce age 61 and up at just 6 percent. EP had the second youngest population with 16 percent in the age 61 and up bucket.

Somewhat paradoxically to the aging workforce noted above is the role of part-time cardiologists in the workforce that continues to trend downward (**Figure 13**). From a high of 13 percent in 2012 it has now been cut by more than half in 2018, showing less than 6 percent of the total cardiology workforce is part-time physicians.

Figure 14 demonstrates that part-time physicians, regardless of call participation, earn substantially less (down 47 percent) than full-time cardiologists and produce around 40 percent fewer wRVUs. Part-time physicians are much more likely to also reduce or eliminate call participation, with over one-third (35 percent) of part-time physicians also reducing or coming out of call entirely. By contrast just 7 percent of full-time cardiologists also reduce or eliminate call participation.

The percentage of cardiologists age 61 and older ticked up in 2018, hitting its highest level ever recorded by MedAxiom at 27 percent.

Figure 13: Trend of Part Time Cardiologists / Total Physician Workforce

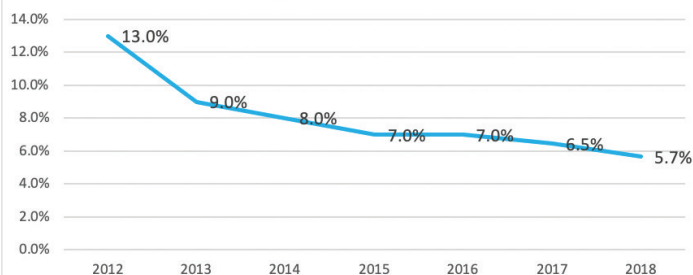
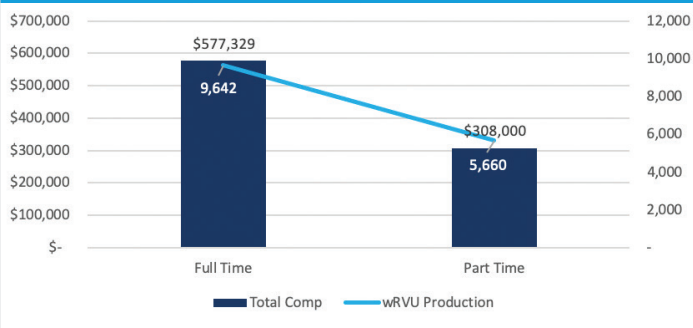


Figure 14: Medians per FTE by Status



Both clinical status (full or part-time) and call participation heavily impact a cardiologist's total compensation and wRVU production (**Table 7**). A full-time cardiologist who drops out of call entirely, but still participates fully in his/her non-call clinical duties, takes a 46 percent cut on total compensation at the medians (\$581,150 vs. \$316,123). A cardiologist practicing part-time and coming off call will earn just 27 percent that of a full-time cardiologist taking full call (\$156,000 vs. \$581,150 per FTE).

Table 7 also shows that a physician coming off call but remaining full-time clinically still sees a nearly 50 percent reduction in wRVUs generated (5,226 vs. 10,098 per FTE). This drop in wRVUs is certainly impacted by lost production during call hours (nights and weekends) but can probably also be explained by a change in clinical role, such as discontinuing invasive/interventional duties.

Looking now at gender, females represent just over 10 percent of the total cardiology physician workforce (**Table 8**). This is up slightly from 2017 and is the highest representation since MedAxiom began tracking these data. When drilling down to the subspecialty level, **Table 9** shows that the concentration of female cardiologists is highest in the general non-invasive and advanced HF categories (18 percent and 38 percent respectively) and lowest in EP and interventional (8 percent and 4 percent respectively). When considering the percentage of cardiologists who practice full-time and those participating fully in call, male and female physicians do so at comparable levels (**Figure 15**).

The full data tables for cardiology compensation and production can be found on [pages 29-30](#).

Females represent just over 10 percent of the total cardiology physician workforce. This is up slightly from 2017 and is the highest representation since MedAxiom began tracking these data.

Table 7: Medians per FTE

	Total Comp	wRVU
Full Time, Full Call	\$581,150	10,098
Part Time, Full Call	\$404,801	7,246
Full Time, Partial Call	\$564,236	9,436
Part Time, Partial Call	\$250,000	5,235
Full Time, No Call	\$316,123	5,226
Part Time, No Call	\$156,000	3,160

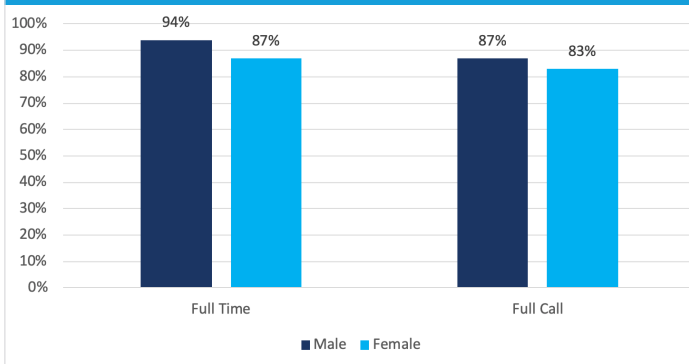
Table 8: Overall Workforce Gender Breakdown

	Male	Female
2017	91%	9%
2018	90%	10.3%

Table 9: Gender Breakdown by Subspecialty

	Male	Female
EP	92%	8%
General Non-Invasive	82%	18%
Interventional	96%	4%
Invasive	91%	9%
Advanced Heart Failure	62%	38%

Figure 15: Status & Call Participation



Integration of Cardiology

While there have been some recent – and perhaps high-profile – examples of cardiologists leaving a hospital/health system integration model, these occurrences are still very rare. As the data in [Figure 16](#) show, the percentage of groups in an integrated model actually ticked up again in 2018 to its highest level ever at 83 percent. Thus, despite a lot of energy around the topic routinely coined “dis-integration” the number of cardiologists who reside within a hospital or health system through either employment or a professional services agreement continues to rise.

With the advent of new payment models, the transition of more invasive care to the ambulatory setting and the impact of non-traditional players (i.e., Amazon, Apple, Google, etc.) on healthcare, this trend may reverse itself. However, at the moment the integrated model remains solidly entrenched.

Key Cardiology Volumes and Ratios

The median number of cardiologists in the groups reporting for this survey was 13 FTEs for 2018 ([Figure 17a](#)). The largest group reporting was 72 cardiologists, with the smallest being a solo practice (1 FTE). Interestingly the median group size that reports to the survey has been declining over time, from a high of 16 physicians in 2013 to the current 13 ([Figure 17b](#)).

The utilization of APPs is still widely variable among cardiology practices, with some groups having no APPs at one end to groups having nearly 1.5 APPs per physician on the other. The percentiles for APP utilization from 2018 are shown in [Figure 18](#). From a recent survey of cardiovascular leaders for the MedAxiom Spring 2019 CV Transform meeting we know that expanding access is a major focus of programs today. Given this, it is surprising that utilization of APPs has remained both highly variable, with no “best practice” emerging, and very constant – the median has remained below 0.5 FTEs per physician for the past five years. This will be a metric to watch in the future given the valuable role APPs can play in increasing access and reducing expenses (the number two priority response from cardiovascular leadership).

Figure 16: Ownership Model Trend

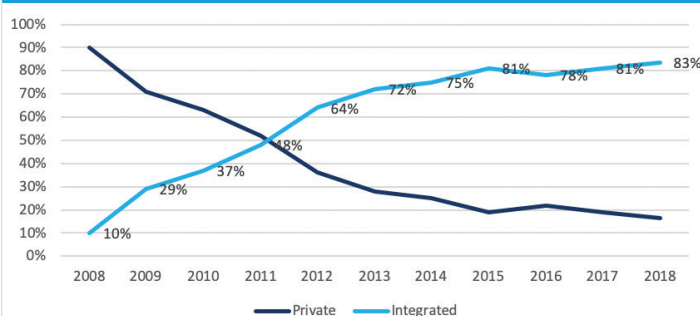


Figure 17a: Group Size in Cardiologist FTEs

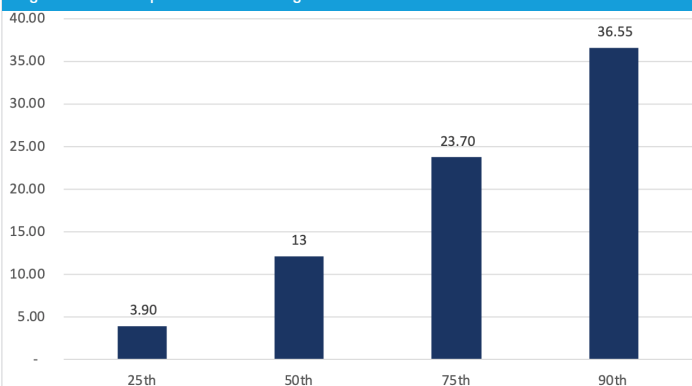


Figure 17b: Trend of Physician FTEs

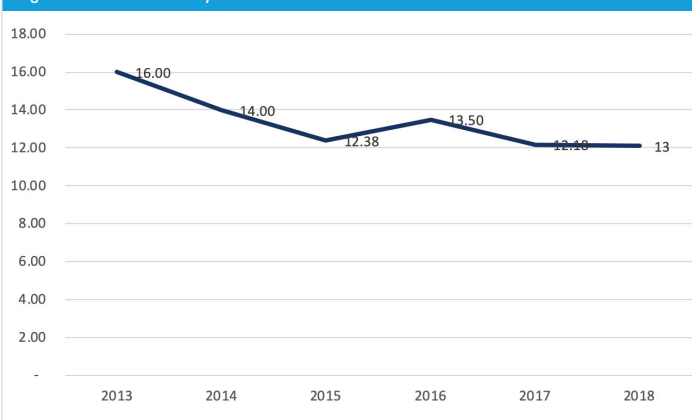
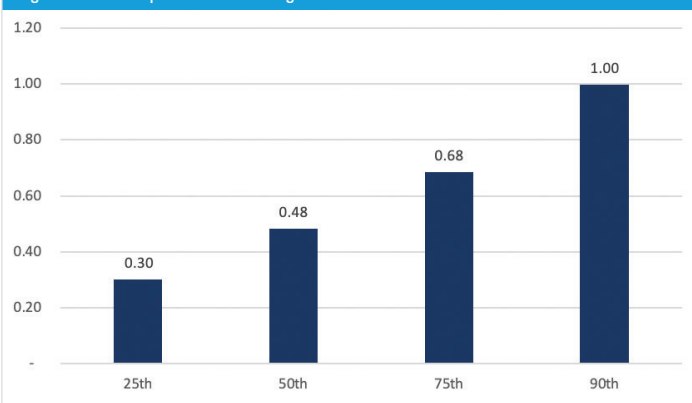


Figure 18: APPs per FTE Cardiologist



After several years of dormancy, new patient volumes in the cardiology practice have nudged up for two consecutive years (**Figure 19**), reaching nearly 600 new patients per FTE physician with most of this growth coming from expanding ambulatory volumes. During this time period, inpatient new patient volumes have remained very static. In general, hospital work for cardiologists is either flat or declining, as demonstrated by the volume of discharges performed shown in **Figure 20**. As heard through the MedAxiom community, cardiologists are moving more and more to a purely consultative role in the inpatient setting (**Figures 19 and 20**).

Looking now to the ambulatory side of the practice, **Figure 21** shows the median number of return office visits per FTE physician, along with median panel size (active patients; see “Glossary” on [page 36](#)). In addition, this graph presents the ratio of the two (right hand axis), effectively providing the number of follow-up provider visits per active patient, which for 2018 sits at just over one visit (1.15) per year per active patient.

It is important to note that this ratio may not represent a best practice or even a desired state. Many practices have significant access constraints, as evidenced by this topic rising to the top of the list of concerns for cardiovascular leaders noted earlier. Therefore, follow up visits may not occur as regularly as needed simply by virtue of provider scheduling restrictions.

To test this in your own practice, work with your physicians to determine the desired state for annual follow-up visits per active patient. This clearly will not be an exact science given the varied clinical nature of an active cardiovascular patient, but the data are still very valuable for a directional indication of access ability. When you multiply this desired state by the panel size within your practice, if the product is more than your templated follow-up slots you have identified an access challenge.

Keeping our focus on the ambulatory patient population, **Figure 22** shows a percentile ranking of the ratio of new patients to follow-up visits. In MedAxiom’s experience, a

Figure 19: Median Volumes per FTE Physician

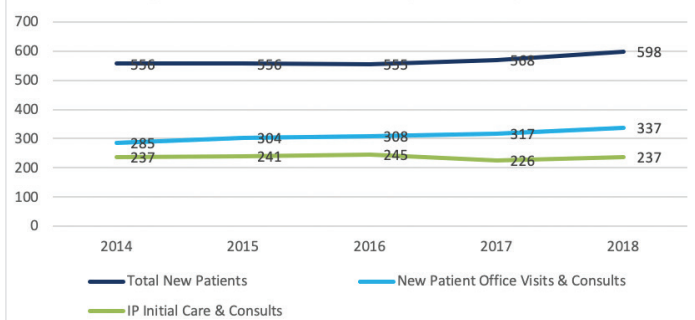


Figure 20: Median Discharges per FTE Physician

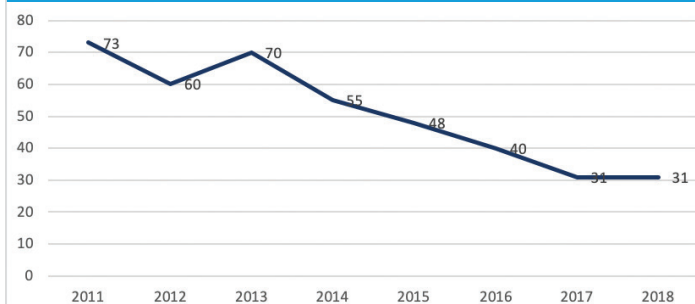


Figure 21: Median Return Office Visits per FTE Physician

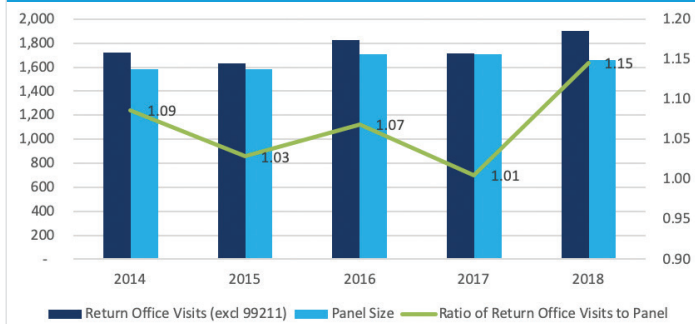
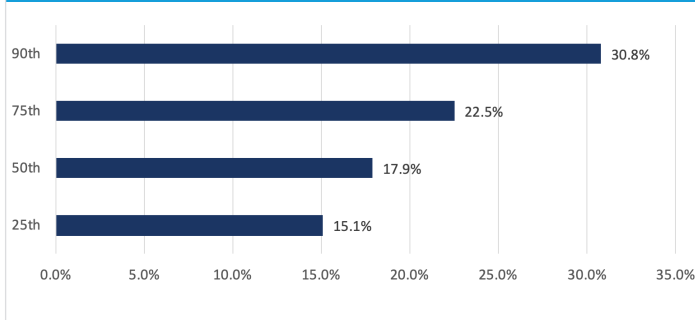


Figure 22: Percent of Ambulatory New Patients to Ambulatory Return Visits



healthy ratio for this metric is 30 percent – an indication that the availability to new patients is sufficient to maintain a growing practice. As is seen in the data, only 10 percent of the reporting groups are able to achieve this threshold. The data around access in the practice of cardiology today seems to indicate a significant opportunity for effective utilization and deployment of APPs. The case for this opportunity will be supported later in the report when APP production is explored in more depth.

In 2018 the median cardiology practice was able to maintain an active patient population of 1,661 patients per FTE cardiologist (Figure 23). When using all providers as the denominator, including APPs, this number drops to 1,184 active patients per provider. Interestingly, groups in the top quartile in terms of utilization of APPs per FTE physician are able to manage active patient panels 10 percent larger than the average overall (2,066 active patients per FTE vs. 1,881 patients). This indicates a strong link between APP utilization and expanded access.

Figure 24 shows utilization per 1,000 active patients imaging in cardiology, with nuclear SPECT still taking the top spot at 114 studies per 1,000 patients. This does not tell the entire story on SPECT as can be seen in Figure 25, where the utilization of SPECT has been on a declining trajectory for nearly a decade. Nuclear PET has not embedded itself in the cardiology imaging repertoire to any significant degree as also seen in Figure 25. Further, just 20 percent of the survey respondents even offer nuclear PET. We also see this with both cardiac computed tomography (CT) angiography and cardiac magnetic resonance imaging. New technologies – such as functional flow reserve with CT – and a changing reimbursement climate – population cost models – may change the utilization patterns found in these data, as there are widely variable cost differences between these modalities.

As evidence of a changing imaging environment, utilization of cardiac cath has been declining for cardiovascular patients for years (Figure 26). At the same time, the percutaneous coronary intervention (PCI) rates have been basically flat. This means that the ratio of patients going to the cath lab who receive an intervention is on the increase; said another way, through multiple means cardiologists are better able to determine who needs the invasive – and expensive – catheterization and who does not.

Figure 23: Patient Panel Size per FTE

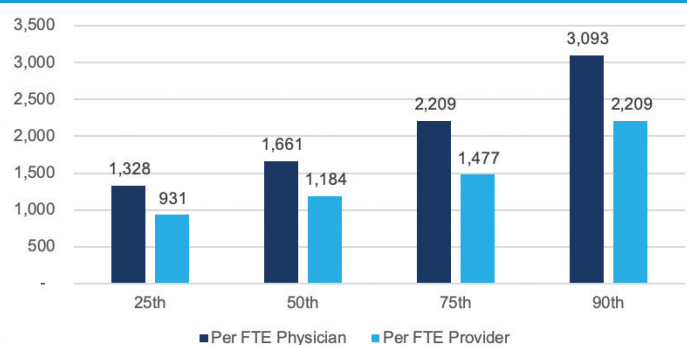


Figure 24: Median Volumes per 1,000 Patient Panel in Groups Offering the Modality

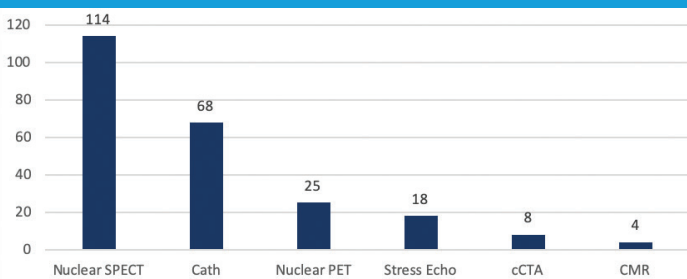


Figure 25: Median Nuclear Volumes per 1,000 Patient Panel

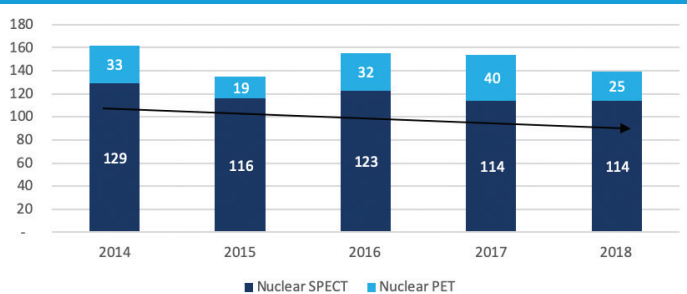
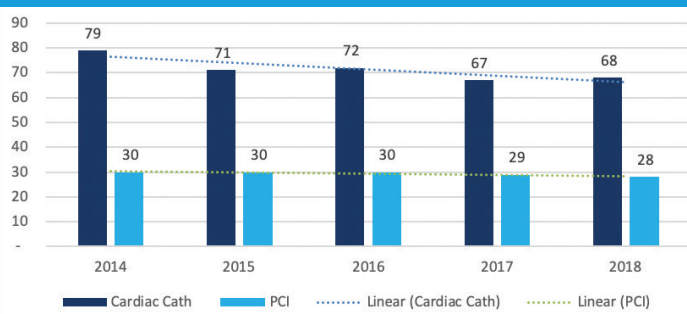


Figure 26: Median Invasive Volumes per 1,000 Patient Panel



Staying with invasive procedures, **Figure 27** shows the percentile rankings of cardiac cath volumes between invasive cardiologists and interventionalists. At the median, interventional physicians perform nearly three times more cardiac cath per FTE than do invasive cardiologists (242 vs. 85). One-fourth of invasive cardiologists are performing 32 or fewer cardiac cath per year. **Figure 28** shows that half of interventional cardiologists perform 114 or more PCIs per year, with 25 percent performing 67 or less per year.

In contrast to the invasive volumes noted above, transcatheter aortic valve replacement (TAVR) volumes have been steadily increasing as shown in **Figure 29**. Of the groups that reported

having an interventional program (using PCI volumes as the indicator), 65 percent also reported TAVR volumes. For those programs with TAVR, the percentile rankings for utilization per 1,000 patients is shown in **Figure 30**.

The main procedural volumes within EP are demonstrated in **Figure 31**, with ablations on an upward trend and implantable cardioverter defibrillator (ICD) moving in the opposite direction.

Figure 27: Cath Volumes by Subspecialty Type

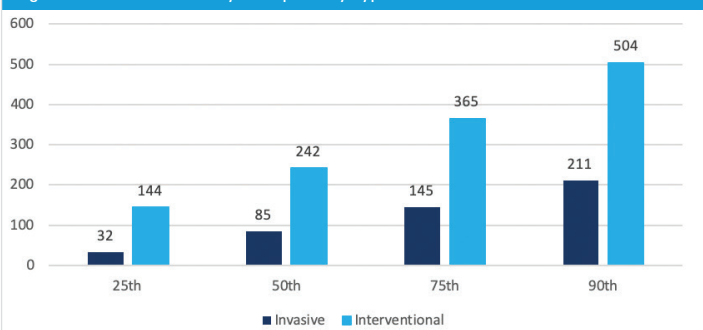


Figure 28: EP Procedures per 1,000 Patient Panel

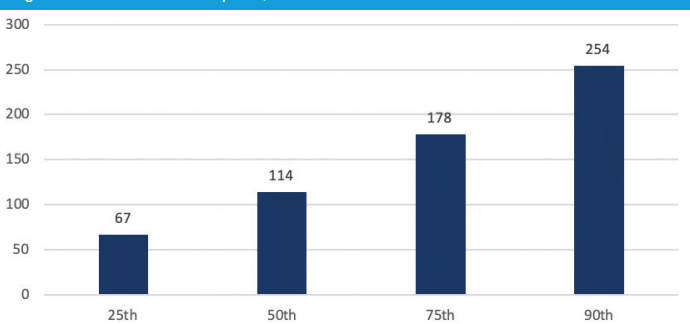


Figure 29: Median TAVR Volumes per 1,000 Patient Panel

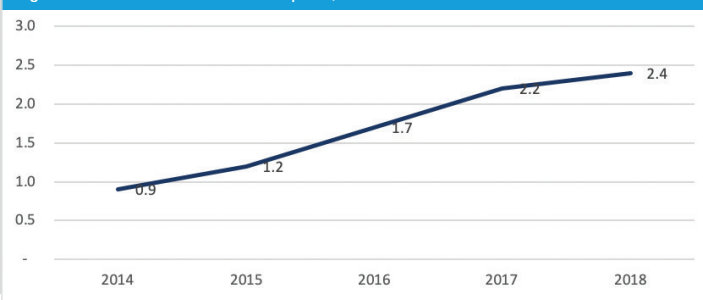


Figure 30: TAVR per 1,000 Patient Panel

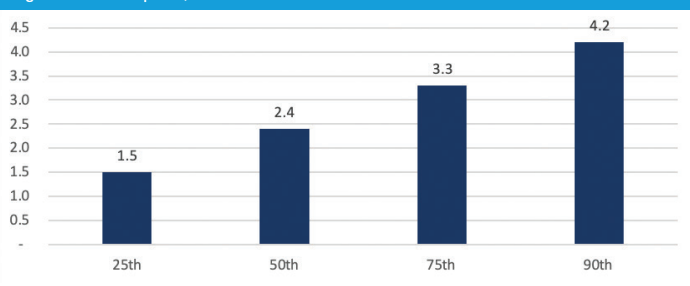
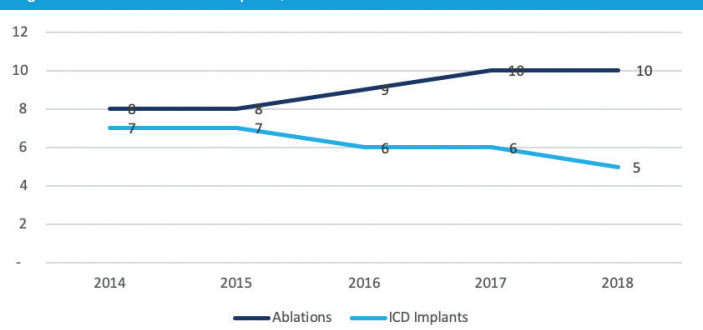


Figure 31: Median Volumes per 1,000 Patient Panel



SURVEY RESULTS – SURGERY

Compensation

After falling back in 2017, cardiac surgery total compensation surged forward in 2018, jumping nearly \$194,000 per FTE physician to a median of \$795,461 (**Figure 1**). Vascular surgery also increased in 2018 when compared to 2017, but by a very modest 2.5 percent to a median of \$491,072 per FTE. Cardiac surgeons out earn vascular surgeons when considering overall results and for those employed or integrated with a hospital or health system (**Figure 2**).

However, private vascular surgeons earn substantially more than their integrated peers and even more than cardiac surgeons. This may be an indication that the few vascular surgeons that choose the private group setting – which is less than 10 percent (**Figure 3**) – may have significant forms of other income, such as ownership in office-based labs, surgery centers or perhaps contracts with hospitals for coverage. Cardiac surgeons also tend to favor the integrated model with barely 10 percent favoring the private ownership course.

Until this year, both cardiac and vascular surgery median total compensation has been relatively static (**Figure 4**) over time. However, as noted above, cardiac surgery jumped up in 2018 while vascular surgery stayed relatively the same. It will be interesting to watch this metric in future years to see if this is a trend or simply a blip in the survey data.

Figure 2: Total Compensation per FTE

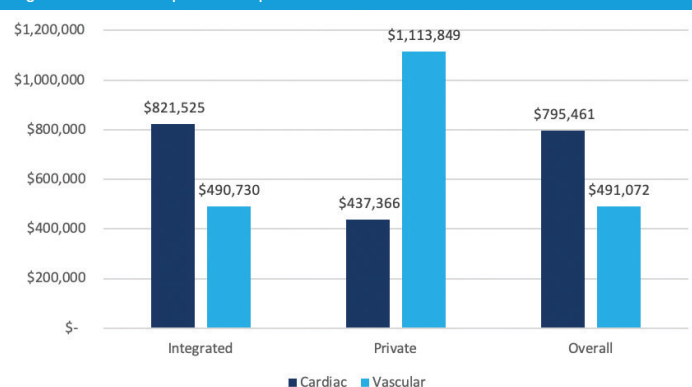


Figure 3: Ownership Breakdown by Group for Surgery

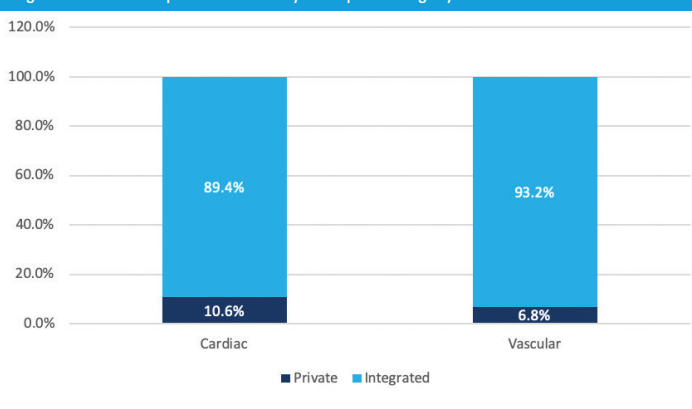
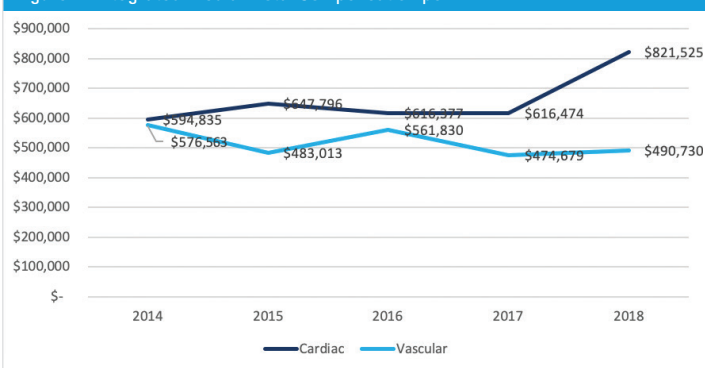


Figure 1: Median Total Surgical Compensation per FTE



Figure 4: Integrated Median Total Compensation per FTE



Production

Despite the significant jump up in total compensation for cardiac surgeons, median wRVU production fell slightly in 2018, as did median production for vascular surgeons (Figure 5). In both cases this continues a general trend downward in production for these cardiovascular surgery specialties as illustrated by their respective trend lines.

This same figure shows that cardiac surgeons out produce vascular surgeons by a significant margin at the medians. However, Figure 6 shows that this difference in production is found most significantly between integrated surgeons, whereas private cardiac and vascular surgeons are nearly in a dead heat for production (11,072 vs. 11,108 respectively).

Figure 7 shows production by geographic region. For cardiac surgeons, the Midwest comes out on top in terms of wRVUs produced per FTE, while that honor goes to the South for vascular surgeons.

Compensation per wRVU

Cardiac and vascular surgeons who are integrated with a hospital or health system earn nearly identical total compensation per wRVU rates (Figure 8). However, because of the significant earnings of the small number of vascular surgeons in private practices, these physicians calculated total compensation per wRVU is nearly three times higher than private cardiac surgeons. The total earnings rate per wRVU for cardiac surgeons has been very stable over time (Figure 9), sitting at \$61.40 per wRVU in 2018, while it has increased for vascular surgeons from \$54.82 in 2014 to \$63.13 in 2018.

The full data tables for surgical compensation and production can be found on [page 31](#).

Figure 6: wRVUs per FTE by Ownership

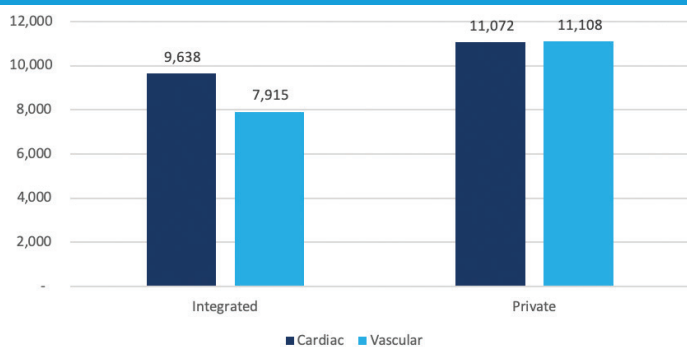


Figure 7: Median wRVU per FTE Physician

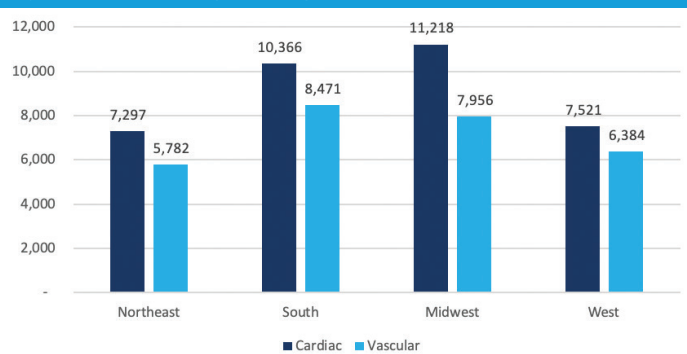


Figure 8: Median Total Compensation per wRVU

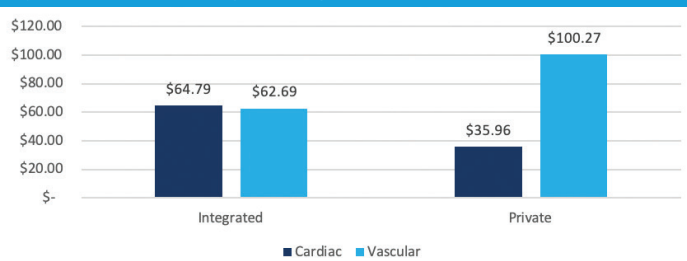


Figure 5: Median wRVUs per FTE Physician

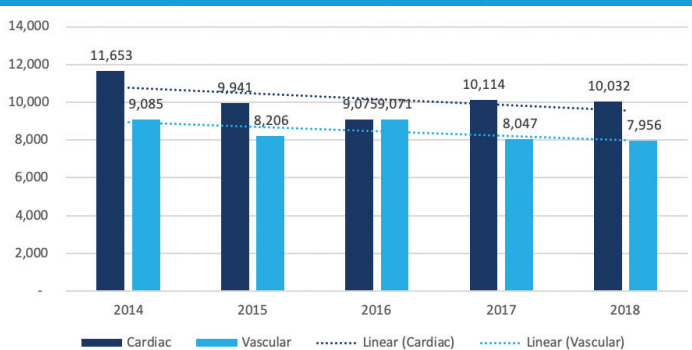
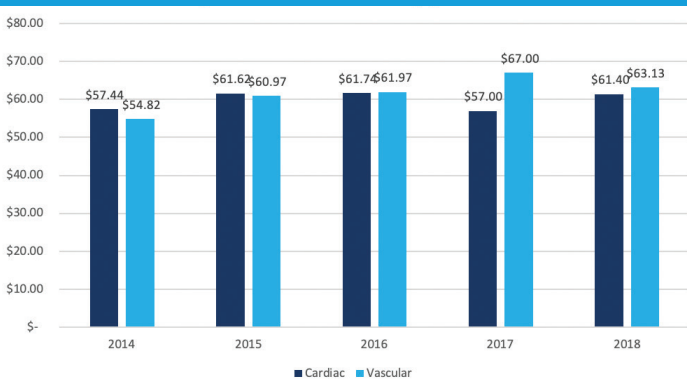


Figure 9: Median Total Compensation per wRVU



SURVEY RESULTS – APPs

Role Within Cardiovascular

Surgeons continue to utilize more APPs per physician FTE than do cardiologists. As demonstrated in [Figure 1](#), both cardiac and vascular cohorts are deploying more APPs per physician than cardiology. The gap between surgery and cardiology and the overall utilization pattern has remained relatively consistent over time ([Figure 2](#)). As was noted earlier in this survey, the stagnant utilization of APPs, particularly in cardiology, is surprising given the current heavy focus of programs on expanding access and reducing costs.

In a continued effort to bring significant value to the cardiovascular community, MedAxiom performed a more detailed survey around specific APP utilization patterns earlier this year. The full results of the *2019 Cardiovascular APP Utilization Survey* are available to MedAxiom members. To become a member, visit [MedAxiom.com](https://www.MedAxiom.com).

Compensation

Surgical APPs earn more than their cardiology peers at each of the percentiles within the survey ([Figure 3](#)). At the medians, cardiac surgery APPs earn just over \$22,000 more per FTE than cardiology APPs. Vascular surgery APPs earn nearly the same as cardiology APPs when comparing medians (\$105,000 per FTE and \$104,647 per FTE respectively).

However, cardiology APP total compensation, measured at the median, has been steadily increasing over time while cardiac surgery APP total compensation has remained relatively flat ([Figure 4](#)). Thus, the delta between these two cohorts has narrowed over the past five years. Total compensation for vascular surgery APPs – which has bounced around somewhat – saw a setback in 2018 after three straight years of increases.

Figure 1: APP FTEs per Physician FTE

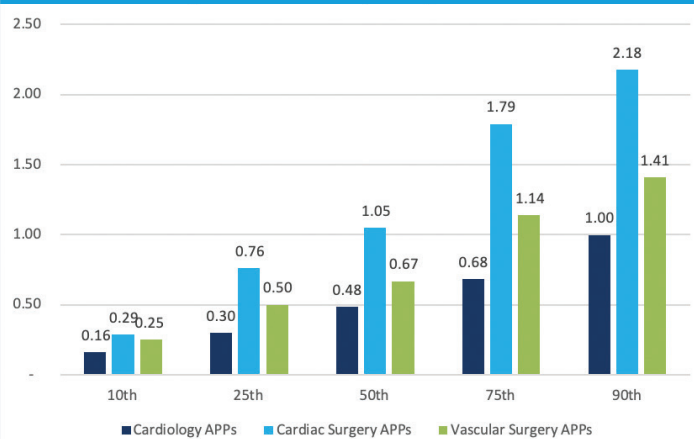


Figure 2: Median APPs per FTE Physician

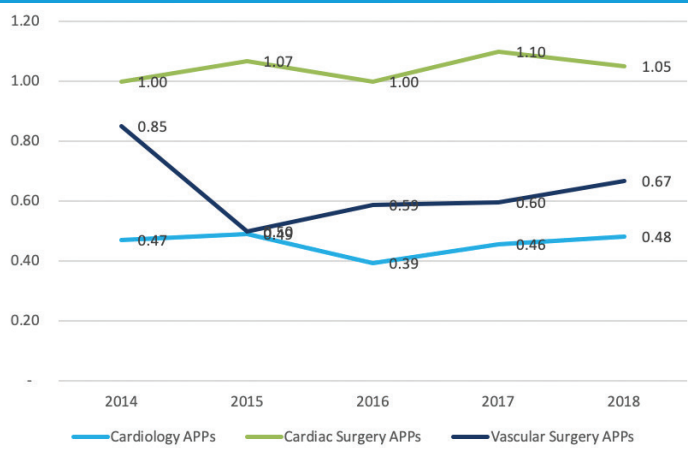


Figure 3: APP Total Compensation by Quartiles

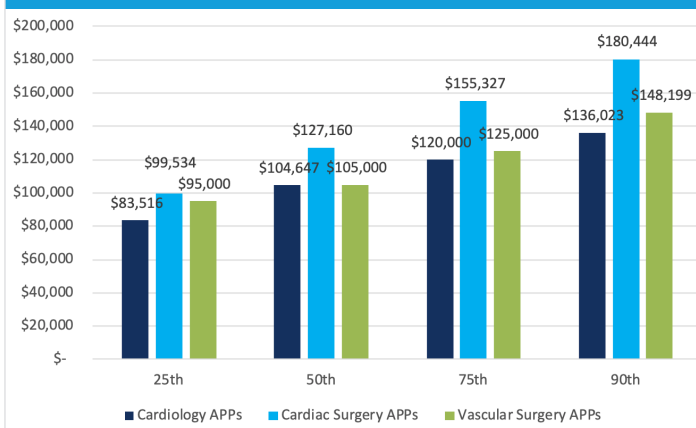


Figure 4: Median Total APP Compensation per FTE

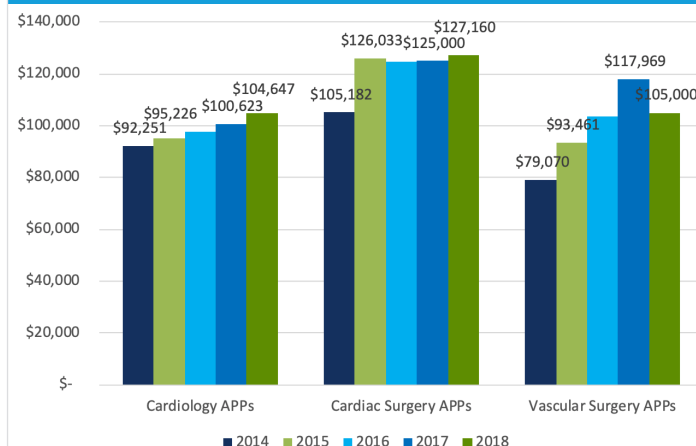


Figure 5: Median Total Compensation per FTE APP

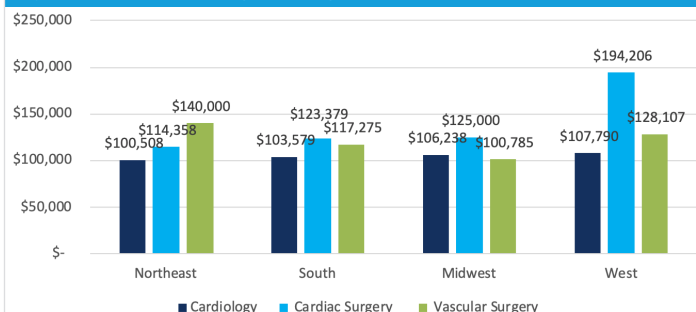


Figure 6: Median wRVU Production per FTE APP

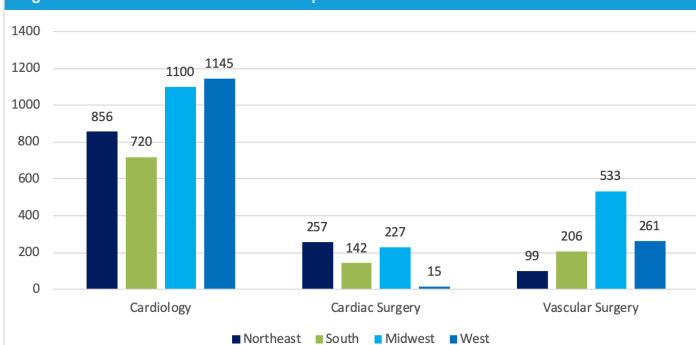


Figure 7: APP Median Total Compensation per FTE

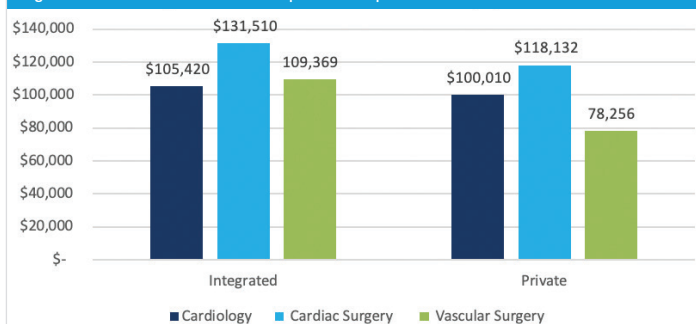
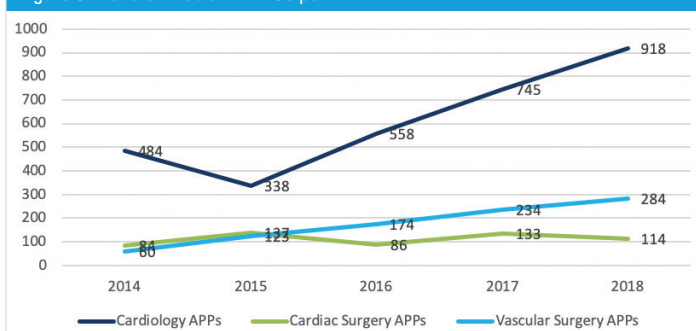


Figure 8: Trend of Median wRVUs per APP FTE



Cardiac surgery APPs in the West region of the country earn substantially more than any other region – as compared to either cardiology or vascular APPs (Figure 5) – reporting median total compensation of \$194,206 per FTE. This is over \$50,000 more per FTE than the next highest, reported value which is vascular surgery APPs in the Northeast. It is not clear what is driving the significantly higher compensation for cardiac surgery APPs in the West, but it could be attributed to simple supply and demand economics. It is not due to greater wRVU production, at least not at the individual APP (Figure 6) or surgeon level (recalling back to surgeon production page 23), given the West was low in both metrics compared to other geographies.

The practice ownership model also plays a role, with APPs in private practices earning less than their peers in integrated models, similar to the physician data (Figure 7).

Production

Turning now to the production side, Figure 8 shows the median production for a full-time cardiology APP has been trending steadily upward over time. This most likely reflects concerted efforts on the part of programs to better utilize these valuable resources. Still, at 918 wRVUs, this production is well below the reasonable ability of an APP to generate wRVUs over the course of the year, which points to two main probabilities: 1) the work performed by the APPs is being billed under the physician provider number; or 2) the APP is performing mostly non-billable work.

For item 1 there can be some very legitimate and still highly efficient reasons that APP production would end up under the physician; split-shared hospital visits and an incident-to visits in the office are examples. There can also be very inefficient reasons, such as APPs being used to “tee up” patients, in a scribe role simply for documentation, or as a medical secretary, which would also fall under item 2.

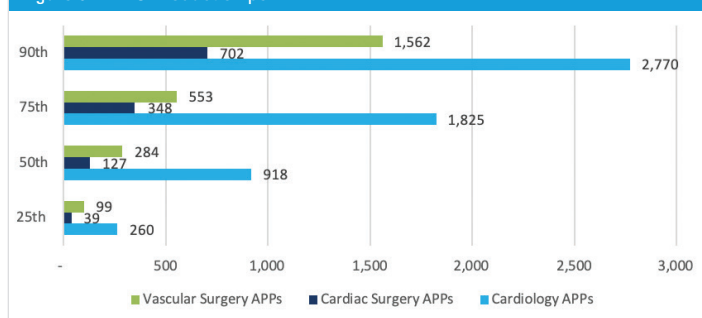
Although APPs are much less expensive than cardiologists, they are still relatively expensive when compared to other clinical support personnel, such as nurses and medical assistants. Underutilizing these resources tends to lead to job dissatisfaction and then turnover, plus limits a program’s ability to reduce costs and improve access.

Figure 8 also shows the trend of wRVU production for both surgical specialties, with vascular APP production trending up and cardiac APP production holding steady. Both groups' median APP production is substantially lower than that of a full-time cardiology APP, which is a reflection of the global billing nature of surgery. Most surgical cases, which would be billed entirely under a surgeon's provider ID (thus attributing the wRVUs to the surgeon), are global in nature and include follow-up visits for an extended period (i.e., 90 days) beyond the surgery itself. Thus, it is likely that in many cases the APP is performing these post-surgical follow-ups while the wRVUs would be attributed to the surgeon as part of the global case.

The percentile rankings for APP production can be found in **Figure 9**.

The full data tables for APP compensation and production can be found on [page 32](#).

Figure 9: wRVU Production per FTE APP



“Negotiating compensation arrangements is challenging for many reasons. Comprehensive, trustworthy data upon which informed decisions can be made is an absolute requirement for the process to be successful. We find MedAxiom's Cardiovascular Provider Compensation & Production report to be an extremely useful tool to draw upon.”

WILLIAM A. GIUDICE
CHIEF FINANCIAL OFFICER
TALLAHASSEE MEMORIAL HEALTHCARE
TALLAHASSEE, FL

SURVEY RESULTS – NON-CLINICAL COMPENSATION

As the name implies, non-clinical compensation comes from sources other than those for direct patient care activities associated with a CPT code. Although MedAxium began tracking some components of non-clinical compensation, such as medical directorship pay, more than 10 years ago, pay-for-performance improvement initiatives were added in 2014. As Medicare and other third-party payors have introduced value into the reimbursement architecture, provider reward systems have followed suit debuting incentives around performance improvement initiatives.

Such reward systems have become so popular in cardiovascular compensation plans that nearly half of groups have some form of non-clinical incentive compensation (**Figure 1**).

The monies allocated to these efforts are not inconsequential.

Figure 2 shows both what was earned and available for hospital incentive plans, with 25 percent of the groups having over \$50,000 per physician in each category. Further, physicians earned 92 percent of the monies available in 2018 (**Figure 3**), which is up from previous years.

Figure 4 shows the percentiles for three common non-clinical compensation pools: call, directorships and leadership positions.

Perhaps not surprisingly, compensation for call activities is the most significant, with median compensation of just over \$20,000 per FTE physician. MedAxium data show that

Figure 1: Presence of Non-Clinical Incentives

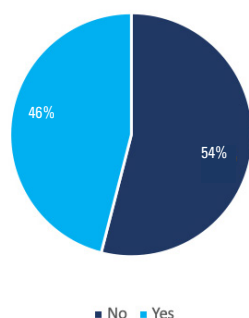


Figure 2: Hospital Incentives per FTE Cardiologist

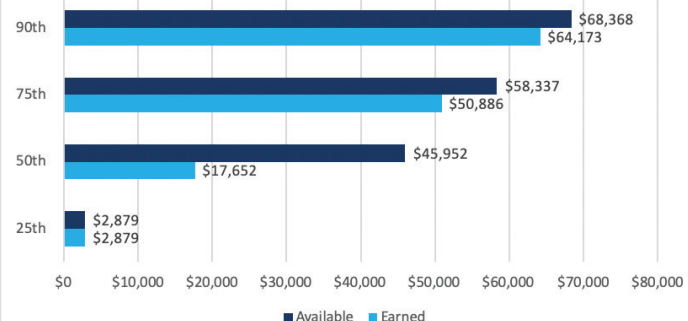


Figure 3: Percent of Available Hospital Incentive Earned

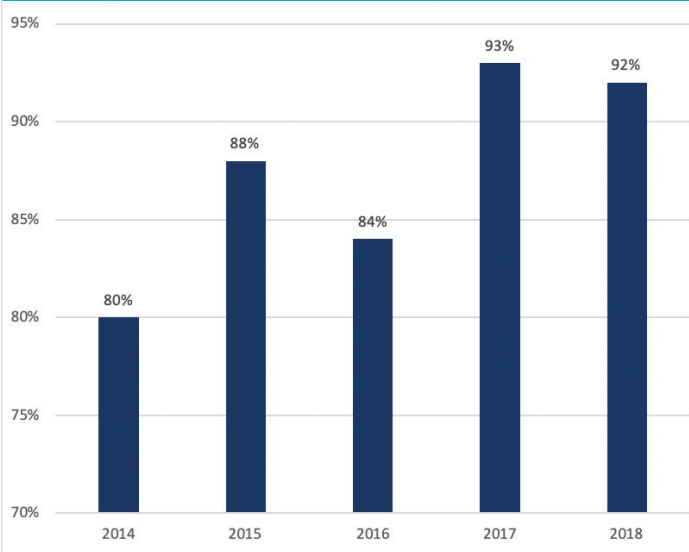
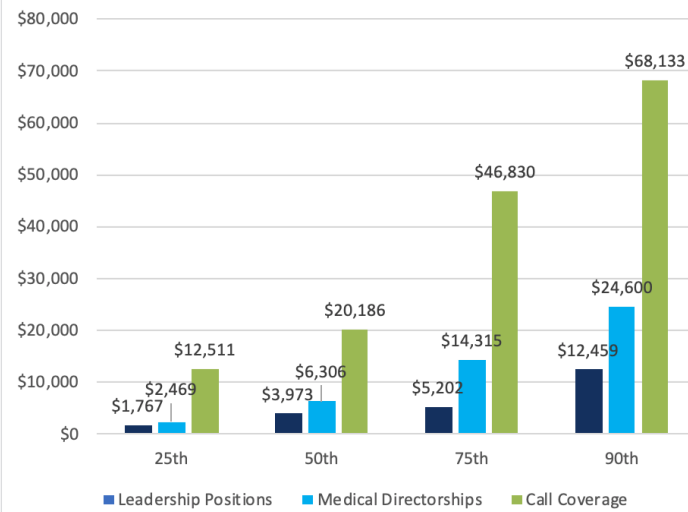


Figure 4: Hospital Non-Clinical Compensation per FTE Cardiologist



cardiologists put a premium on the value of call participation, with ranges from 20 to 50 percent of total compensation. In other words, a cardiologist who decides to discontinue call participation can expect a pay cut in the range of 20 to 50 percent, all other things being equal.

Total compensation from non-clinical sources at the median was \$33,450 in 2018 (**Figure 5**) and represented 7 percent of the physician's total compensation. For 25 percent of groups these non-clinical sources represent over 10 percent of total compensation and are north of \$60,000 per physician FTE. These amounts are "per FTE physician" so when you consider the total group amount you begin to get a sense of the significance these monies play in terms of total compensation.

To illustrate this point, **Figure 6** provides a breakdown of non-clinical compensation at the group level, whereas the previous data were at the physician level, or "per FTE". We can see that the median group earned just over \$870,000 in total non-clinical compensation. The bulk of these earnings came from two sources: call pay and hospital performance improvement incentives (\$582,042 and \$529,559 median respectively). Of note is the size of the pools of "available" hospital incentives, which in 2018 found half the groups had over \$1 million in potential earnings at risk. Clearly this is a meaningful amount of money regardless of the size of the group.

Also in **Figure 6**, we see that medical directorships generated just under \$200,000 in earnings per group at the median, with the average being \$271,119. **Figure 7** shows the percentile breakdowns of hourly payment rates for these directorships.

Definitions for each of the published measures can be found in the Glossary on [pages 36-37](#).

Figure 5: Total Non-Clinical Compensation per FTE Cardiologist

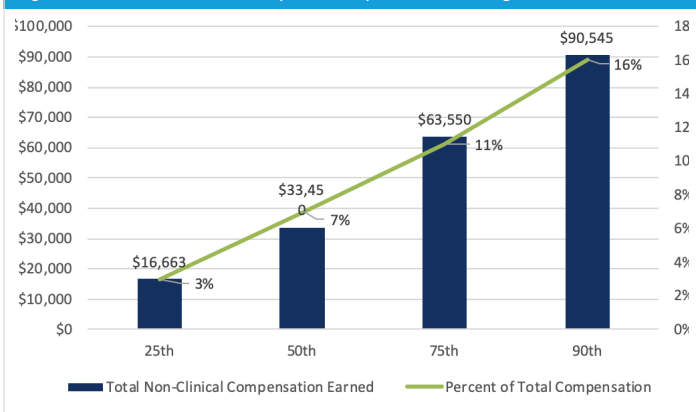


Figure 6: Group Level Non-Clinical Compensation

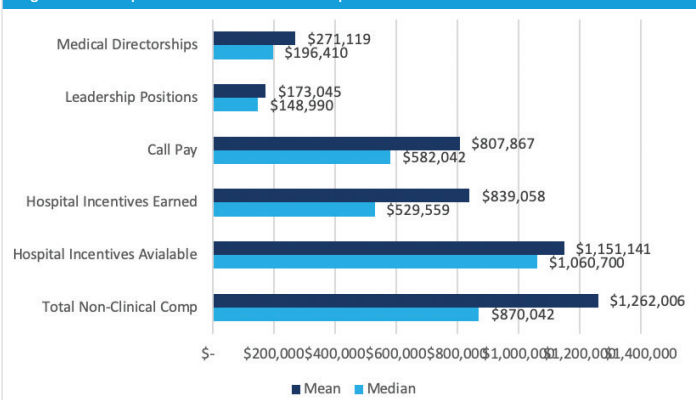


Figure 7: CV Medical Directorship Hourly Rates

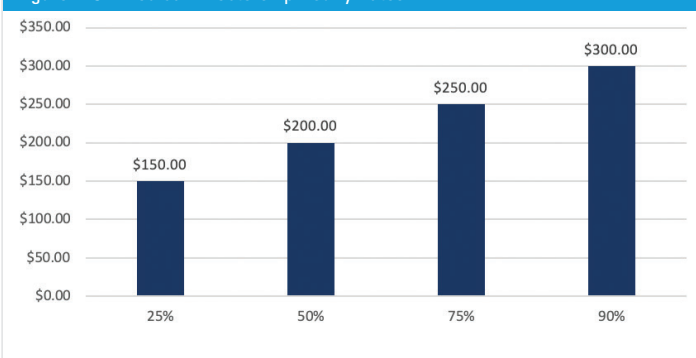


TABLE 1: PHYSICIAN COMPENSATION – CARDIOLOGY

		2015					2016					2017					2018				
		N	25%	50%	75%	90%	N	25%	50%	75%	90%	N	25%	50%	75%	90%	N	25%	50%	75%	90%
3-1-0100 Actual Compensation per Cardiologist	Private	2,278	\$415,383	\$557,915	\$671,899	\$835,532	2,044	\$431,223	\$592,636	\$692,641	\$848,759	2,156	\$401,348	\$559,568	\$695,163	\$852,983	1902	\$412,613	\$577,329	\$686,740	\$830,492
	Electrophysiology	503	\$318,380	\$486,777	\$624,370	\$766,060	541	\$339,357	\$534,000	\$642,298	\$778,513	549	\$330,249	\$480,000	\$674,034	\$868,542	501	\$360,989	\$517,600	\$675,382	\$873,588
	Invasive	76	\$382,856	\$498,208	\$604,072	\$767,879	75	\$375,150	\$575,610	\$650,000	\$785,206	65	\$403,143	\$504,560	\$674,034	\$799,895	57	\$391,844	\$568,043	\$687,245	\$1,038,502
	General Non-Invasive	66	\$294,880	\$467,455	\$587,500	\$773,887	69	\$335,191	\$530,222	\$606,681	\$763,903	48	\$268,333	\$389,486	\$674,034	\$737,194	51	\$293,605	\$429,687	\$644,721	\$676,213
	Interventional	102	\$268,658	\$413,660	\$544,276	\$674,021	136	\$274,197	\$456,626	\$624,248	\$680,766	158	\$304,706	\$394,060	\$521,129	\$663,114	131	\$286,908	\$382,954	\$558,634	\$666,221
Advanced Heart Failure	Integrated	259	\$339,684	\$510,000	\$660,457	\$834,099	260	\$371,392	\$534,444	\$673,981	\$815,290	258	\$370,867	\$524,784	\$726,357	\$914,852	230	\$409,859	\$573,455	\$713,210	\$933,001
	Invasive	1,775	\$441,984	\$577,756	\$680,948	\$848,751	1,503	\$455,180	\$592,418	\$719,205	\$871,812	1,607	\$432,777	\$580,554	\$706,010	\$848,336	1401	\$447,754	\$581,568	\$698,140	\$809,296
	General Non-Invasive	256	\$495,961	\$597,353	\$730,979	\$959,412	220	\$502,416	\$619,479	\$788,750	\$1,064,330	234	\$506,000	\$626,317	\$766,128	\$1,019,007	194	\$512,500	\$633,591	\$729,831	\$887,439
	Interventional	322	\$468,243	\$577,756	\$684,800	\$848,550	309	\$461,913	\$579,958	\$729,765	\$832,074	303	\$434,122	\$553,873	\$689,405	\$792,840	199	\$482,495	\$594,417	\$681,984	\$773,285
	Advanced Heart Failure	672	\$500,000	\$620,288	\$734,758	\$867,271	578	\$500,000	\$617,691	\$741,899	\$880,033	566	\$505,304	\$617,508	\$736,222	\$870,544	481	\$519,602	\$629,340	\$759,004	\$874,301
Geographic Breakdown	Northeast	289	\$362,947	\$517,380	\$618,072	\$674,270	186	\$520,913	\$606,681	\$631,177	\$691,947	406	\$360,742	\$481,618	\$597,396	\$686,169	378	\$359,500	\$500,483	\$598,730	\$676,056
	South	1,176	\$423,479	\$579,124	\$724,843	\$880,915	1,062	\$431,223	\$600,824	\$744,767	\$916,145	1,062	\$407,634	\$602,789	\$753,172	\$904,522	838	\$416,605	\$609,393	\$767,683	\$876,269
	Midwest	521	\$466,024	\$573,284	\$658,117	\$788,137	479	\$457,892	\$584,405	\$679,780	\$805,002	377	\$485,275	\$580,594	\$682,019	\$863,000	463	\$487,099	\$580,000	\$665,237	\$831,233
	West	292	\$372,615	\$490,488	\$624,370	\$818,596	317	\$359,163	\$485,155	\$593,469	\$740,375	311	\$370,867	\$513,245	\$618,457	\$768,168	223	\$449,515	\$546,482	\$679,730	\$805,603
	Advanced Heart Failure	332	\$459,000	\$572,066	\$693,925	\$926,392	295	\$483,132	\$607,336	\$748,474	\$1,019,627	299	\$470,322	\$598,704	\$747,460	\$980,132	251	\$488,862	\$629,641	\$729,690	\$887,439
Overall	Electrophysiology	388	\$435,265	\$560,604	\$670,517	\$847,082	378	\$443,321	\$571,010	\$717,476	\$815,980	351	\$406,767	\$550,789	\$681,979	\$790,895	250	\$429,687	\$583,211	\$676,535	\$766,398
	Invasive	627	\$350,037	\$489,701	\$614,018	\$698,716	523	\$350,733	\$531,204	\$627,949	\$744,871	623	\$328,434	\$480,000	\$605,572	\$764,867	602	\$339,633	\$493,733	\$596,168	\$725,903
	General Non-Invasive	931	\$460,110	\$587,500	\$720,624	\$865,015	838	\$461,012	\$606,681	\$724,751	\$868,999	824	\$459,388	\$600,000	\$732,270	\$888,393	711	\$489,669	\$621,090	\$753,184	\$879,696
	Interventional	2,088	\$47,48	\$56,55	\$67,57	\$83,27	1,965	\$45,84	\$55,77	\$66,59	\$80,02	2,154	\$47,00	\$57,00	\$71,00	\$95,00	1886	\$46,01	\$57,33	\$70,26	\$90,11
	Advanced Heart Failure	480	\$35,80	\$44,88	\$62,85	\$83,11	534	\$33,72	\$42,81	\$57,76	\$75,95	567	\$37,00	\$46,00	\$60,00	\$77,00	494	\$35,04	\$42,54	\$57,41	\$72,39
3-1-0400 Physician Actual Compensation per Work RVU	Private	70	\$33,11	\$38,53	\$50,67	\$64,04	75	\$30,38	\$38,14	\$50,34	\$69,97	68	\$33,00	\$42,00	\$56,00	\$66,00	58	\$33,43	\$39,91	\$50,34	\$63,83
	Electrophysiology	65	\$44,52	\$60,88	\$83,55	\$114,57	68	\$37,80	\$48,22	\$66,02	\$93,81	54	\$43,00	\$53,00	\$77,00	\$161,00	51	\$32,65	\$42,31	\$60,39	\$102,09
	Invasive	95	\$32,79	\$40,18	\$58,65	\$82,82	134	\$30,65	\$43,11	\$57,64	\$78,71	163	\$38,00	\$47,00	\$59,00	\$70,00	126	\$36,09	\$41,75	\$59,61	\$71,07
	General Non-Invasive	250	\$36,77	\$45,12	\$61,63	\$74,12	256	\$34,31	\$42,69	\$57,63	\$74,92	262	\$37,00	\$45,00	\$59,00	\$73,00	228	\$35,41	\$42,92	\$57,49	\$79,78
	Interventional	1,608	\$50,46	\$58,32	\$69,24	\$83,27	1,431	\$50,72	\$58,23	\$68,30	\$81,73	1,587	\$51,00	\$60,00	\$75,00	\$99,00	1392	\$51,61	\$60,57	\$73,31	\$93,68
Geographic Breakdown	Northeast	226	\$44,56	\$51,58	\$58,72	\$73,10	206	\$46,72	\$52,62	\$59,47	\$67,54	232	\$48,00	\$54,00	\$63,00	\$87,00	193	\$47,17	\$54,92	\$63,31	\$79,25
	South	301	\$52,53	\$59,14	\$69,80	\$80,35	299	\$52,50	\$60,40	\$69,29	\$85,57	301	\$54,00	\$63,00	\$77,00	\$97,00	198	\$54,49	\$62,23	\$74,55	\$98,93
	Midwest	467	\$52,11	\$62,10	\$71,72	\$83,56	362	\$51,72	\$61,40	\$72,03	\$83,69	456	\$53,00	\$66,00	\$80,00	\$102,00	469	\$51,29	\$61,30	\$75,45	\$94,01
	West	614	\$50,95	\$58,04	\$68,74	\$85,05	557	\$51,03	\$58,12	\$67,66	\$79,26	565	\$52,00	\$59,00	\$73,00	\$98,00	481	\$52,28	\$61,71	\$72,34	\$89,80
	Advanced Heart Failure	282	\$47,72	\$58,49	\$70,42	\$81,70	185	\$49,78	\$59,26	\$70,19	\$83,84	401	\$46,00	\$57,00	\$68,00	\$80,00	364	\$42,11	\$54,73	\$66,65	\$77,59
Overall	Electrophysiology	1,119	\$45,84	\$53,97	\$64,88	\$79,88	1,020	\$43,86	\$54,18	\$63,60	\$76,04	1,047	\$43,00	\$54,00	\$66,00	\$89,00	842	\$42,15	\$54,48	\$65,09	\$85,44
	Invasive	401	\$52,08	\$59,63	\$69,76	\$83,56	448	\$51,19	\$60,63	\$70,63	\$84,25	377	\$54,00	\$64,00	\$81,00	\$123,00	460	\$52,57	\$62,58	\$80,66	\$103,12
	General Non-Invasive	286	\$46,96	\$59,11	\$75,61	\$86,65	312	\$44,31	\$53,86	\$65,72	\$78,72	329	\$52,00	\$64,00	\$80,00	\$118,00	220	\$47,83	\$61,71	\$73,11	\$85,71
	Interventional	296	\$40,92	\$50,20	\$57,69	\$71,52	281	\$41,98	\$50,34	\$67,63	\$87,54	300	\$45,00	\$52,00	\$60,00	\$79,00	251	\$42,83	\$52,84	\$61,20	\$74,92
	Advanced Heart Failure	366	\$51,07	\$59,14	\$71,38	\$87,99	367	\$50,70	\$58,58	\$69,25	\$86,37	355	\$53,00	\$61,00	\$77,00	\$106,00	249	\$49,75	\$60,09	\$72,64	\$90,81
Geographic Breakdown	Northeast	562	\$48,33	\$59,92	\$71,43	\$83,27	496	\$45,20	\$58,88	\$70,15	\$82,70	619	\$47,00	\$61,00	\$76,00	\$102,00	595	\$46,43	\$58,25	\$72,70	\$90,55
	South	864	\$46,80	\$55,86	\$66,64	\$83,63	813	\$45,46	\$55,70	\$65,32	\$77,77	827	\$46,00	\$56,00	\$68,00	\$89,00	709	\$45,05	\$57,48	\$69,34	\$89,40
	Midwest	282	\$47,72	\$58,49	\$70,42	\$81,70	185	\$49,78	\$59,26	\$70,19	\$83,84	401	\$46,00	\$57,00	\$68,00	\$80,00	364	\$42,11	\$54,73	\$66,65	\$77,59
	West	1,119	\$45,84	\$53,97	\$64,88	\$79,88	1,020	\$43,86	\$54,18	\$63,60	\$76,04	1,047	\$43,00	\$54,00	\$66,00	\$89,00	842	\$42,15	\$54,48	\$65,09	\$85,44
	Advanced Heart Failure	401	\$52,08	\$59,63	\$69,76	\$83,56	448	\$51,19	\$60,63	\$70,63	\$84,25	377	\$54,00	\$64,00	\$81,00	\$123,00	460	\$52,57	\$62,58	\$80,66	\$103,12

Unless otherwise indicated, the data in this survey filter to full-time providers as indicated by the respondents.

TABLE 2: PHYSICIAN PRODUCTIVITY – CARDIOLOGY

		2015						2016						2017						2018						
		N	25%	50%	75%	90%		N	25%	50%	75%	90%		N	25%	50%	75%	90%		N	25%	50%	75%	90%		
3-4-0100 Work RVUs per Cardiologist	Ownership Model	2,250	7,048	9,724	12,402	15,442		2,059	7,512	10,087	\$13,141	16,657		2,272	6,835	9,411	12,178	16,072		2,402	7,081	9,642	12,550	16,105		
		532	7,298	10,494	13,739	17,225		561	7,774	11,217	\$14,964	17,724		602	7,680	10,028	14,341	18,637		489	7,962	10,407	14,721	17,936		
		77	9,957	12,366	15,567	21,184		80	9,615	13,374	\$17,143	19,906		71	8,906	13,115	16,991	19,947		50	9,017	12,830	16,873	20,664		
		72	4,475	7,360	9,540	11,670		77	6,349	8,937	\$13,087	16,137		56	6,206	8,513	11,503	16,362		51	6,902	10,060	12,271	13,705		
		116	6,367	10,003	13,041	15,434		138	7,196	9,795	\$13,517	15,400		184	6,835	8,584	10,199	13,909		144	7,288	8,659	9,882	13,218		
		267	7,963	10,971	14,624	17,667		265	8,141	11,726	\$15,277	18,789		266	8,645	11,510	16,127	19,166		210	8,590	12,247	16,017	19,483		
		Advanced Heart Failure							1	10,762	10,762	\$10,762	10,762		1	3,578	3,578	3,578	3,578		0	0	0	0	0	
Geographic Breakdown	Ownership Model	1,718	6,997	9,498	11,964	14,848		1,498	7,417	9,859	\$12,470	15,941		1,670	6,561	9,284	11,751	14,604		1,913	6,897	9,492	12,163	15,062		
		240	9,119	11,535	15,012	18,843		212	9,547	12,420	\$15,981	19,690		237	9,058	11,480	14,661	19,031		260	9,298	11,613	14,652	18,464		
		317	7,329	9,446	11,784	14,295		305	7,355	9,261	\$11,972	14,604		297	6,448	8,671	11,428	13,591		295	6,671	9,171	11,533	14,076		
		526	5,739	7,793	9,867	12,024		402	6,441	8,548	\$10,672	13,143		519	5,326	7,793	9,930	11,709		645	5,863	8,096	10,744	13,165		
		635	7,886	10,240	12,718	15,255		572	8,209	10,323	\$12,654	15,956		581	7,812	10,210	12,288	15,525		660	8,062	10,123	12,736	16,289		
		Advanced Heart Failure							7	511	3,073	\$4,235	5,446		4	1,097	4,554	5,832	12,606		25	4,413	4,990	7,581	8,616	
		Northeast	311	6,269	8,195	10,494	12,470		225	7,755	9,288	\$11,575	13,535		496	6,839	8,559	10,581	12,635		414	7,258	8,832	11,343	13,760	
Overall	Ownership Model	1,140	7,752	10,679	13,533	16,997		1,028	8,086	11,211	\$14,729	18,054		1,038	7,783	10,877	14,132	17,930		1,210	7,538	10,744	14,053	17,430		
		475	6,933	9,198	11,306	14,058		472	6,951	9,655	\$11,800	14,137		419	6,335	9,233	11,447	13,898		480	6,078	8,484	10,666	13,201		
		324	6,745	8,580	11,128	14,351		334	6,566	8,831	\$11,530	15,081		319	5,246	8,167	10,451	13,411		298	6,820	9,106	12,033	15,193		
		317	9,498	11,637	15,125	19,750		292	9,560	12,902	\$16,402	19,906		308	8,994	11,570	15,310	19,093		310	9,298	11,696	15,000	18,830		
		389	7,021	9,136	11,441	14,140		382	7,195	9,197	\$12,220	15,047		353	6,303	8,671	11,144	13,802		346	6,691	9,376	11,543	13,928		
		642	5,797	8,013	10,339	12,700		540	6,528	8,826	\$11,367	13,911		703	5,746	7,992	10,029	12,151		789	6,071	8,241	10,517	13,191		
		Interventional	902	7,959	10,446	12,954	16,392		837	8,183	10,678	\$13,387	17,100		847	8,038	10,603	13,321	17,134		870	8,110	10,537	13,639	17,314	
Advanced Heart Failure							8	511	3,073	\$4,235	10,762		5	3,578	4,554	5,832	12,606		25	4,413	4,990	7,581	8,616			

Unless otherwise indicated, the data in this survey filter to full-time providers as indicated by the respondents.

TABLE 3: PHYSICIAN COMPENSATION – SURGERY

	2015					2016					2017					2018				
	N	25%	50%	75%	90%	N	25%	50%	75%	90%	N	25%	50%	75%	90%	N	25%	50%	75%	90%
3-1-0100 Actual Compensation per Surgeon	188	\$426,167	\$584,247	\$750,000	\$1,010,896	204	\$411,714	\$590,642	\$769,643	\$957,070	205	\$397,034	\$581,447	\$749,560	\$945,225	167	\$441,755	\$580,000	\$865,701	\$1,114,523
Ownership Model																				
Private	26	\$235,177	\$402,839	\$551,473	\$795,691	35	\$342,510	\$450,237	\$800,000	\$990,431	21	\$410,894	\$661,178	\$913,286	\$1,355,179	15	\$420,472	\$566,519	\$1,113,849	\$1,352,642
Cardiac	16	\$235,656	\$402,839	\$468,534	\$759,090	21	\$342,510	\$381,279	\$700,000	\$869,467	12	\$375,703	\$457,658	\$661,178	\$835,404	10	\$420,472	\$437,366	\$773,044	\$953,625
Vascular	10	\$211,629	\$252,000	\$626,274	\$795,691	14	\$370,815	\$538,155	\$802,576	\$1,003,027	9	\$869,329	\$913,286	\$1,355,179	\$1,542,886	5	\$804,456	\$1,113,849	\$1,352,642	\$1,607,338
Integrated	162	\$461,575	\$611,468	\$759,486	\$1,053,284	169	\$450,008	\$604,325	\$769,643	\$965,476	184	\$394,514	\$580,017	\$730,339	\$909,992	152	\$445,027	\$580,000	\$860,427	\$1,070,921
Cardiac	96	\$544,107	\$647,996	\$802,197	\$1,134,846	102	\$477,910	\$616,377	\$797,165	\$1,047,695	102	\$510,485	\$616,474	\$812,224	\$945,225	84	\$580,000	\$821,525	\$932,725	\$1,203,717
Vascular	66	\$382,819	\$483,013	\$648,713	\$771,973	67	\$377,061	\$561,830	\$703,852	\$835,643	82	\$280,813	\$474,679	\$655,135	\$842,845	68	\$369,913	\$490,730	\$573,244	\$737,750
Geographic Breakdown																				
Northeast	18	\$369,637	\$519,018	\$599,784	\$744,826	20	\$542,964	\$661,830	\$595,197	\$735,264	19	\$476,305	\$584,469	\$728,360	\$812,224	11	\$174,225	\$500,332	\$797,210	\$843,392
South	83	\$439,062	\$618,056	\$850,000	\$1,189,318	98	\$405,946	\$571,073	\$786,586	\$1,075,160	101	\$308,337	\$539,982	\$716,538	\$918,831	74	\$412,220	\$590,121	\$860,427	\$1,000,000
Midwest	59	\$528,362	\$636,078	\$750,000	\$979,729	50	\$511,854	\$607,336	\$779,250	\$965,476	48	\$509,681	\$616,474	\$842,845	\$966,280	68	\$491,072	\$580,000	\$845,147	\$1,070,921
West	28	\$301,923	\$452,300	\$531,775	\$795,691	36	\$335,598	\$461,574	\$703,198	\$930,431	37	\$397,547	\$556,555	\$835,404	\$1,137,584	14	429*639*	\$1,113,849	\$1,352,642	\$1,671,235
Overall	112	\$468,534	\$627,030	\$763,136	\$1,080,037	123	\$445,468	\$607,336	\$797,165	\$994,942	114	\$462,524	\$601,648	\$811,009	\$945,225	94	\$566,519	\$795,461	\$932,725	\$1,153,013
Vascular	76	\$369,637	\$478,079	\$647,301	\$795,257	81	\$377,061	\$561,830	\$703,852	\$837,262	91	\$280,813	\$479,010	\$717,750	\$913,286	73	\$370,000	\$491,072	\$580,000	\$922,014
3-1-0400 Individual Surgeon Salaries (no benefits) per Work RVU	155	\$48.74	\$61.62	\$74.86	\$100.40	195	\$48.75	\$61.80	\$81.31	\$124.08	205	\$47.00	\$60.00	\$87.00	\$135.00	166	\$48.31	\$62.69	\$89.35	\$123.79
Ownership Model																				
Private	26	\$33.52	\$40.72	\$60.55	\$93.87	31	\$30.08	\$34.61	\$46.50	\$62.77	21	\$38.00	\$47.00	\$79.00	\$108.00	15	\$35.01	\$39.50	\$81.42	\$106.10
Cardiac	16	\$32.41	\$37.43	\$45.22	\$50.17	18	\$30.08	\$32.63	\$39.63	\$50.34	12	\$37.00	\$39.00	\$41.00	\$58.00	10	\$35.01	\$35.96	\$42.73	\$43.37
Vascular	10	\$49	\$61	\$94	\$100	13	\$31	\$38	\$53	\$106	9	\$60	\$88	\$108	\$216	5	\$81.42	\$100.27	\$106.10	\$129.41
Integrated	129	\$52.46	\$62.80	\$77.31	\$102.62	164	\$53.92	\$65.25	\$82.90	\$129.18	184	\$50.00	\$61.00	\$87.00	\$145.00	151	\$50.01	\$63.21	\$89.85	\$123.79
Cardiac	74	\$54.55	\$63.15	\$74.86	\$85.80	97	\$54.48	\$65.52	\$82.90	\$124.08	103	\$47.00	\$59.00	\$79.00	\$102.00	83	\$50.01	\$64.79	\$93.04	\$127.85
Vascular	55	\$47.41	\$60.97	\$82.78	\$117.01	67	\$52.99	\$64.94	\$83.23	\$141.16	81	\$51.00	\$66.00	\$96.00	\$167.00	68	\$49.19	\$62.69	\$74.03	\$117.66
Geographic Breakdown																				
Northeast	18	\$62.29	\$66.88	\$88.92	\$146.91	20	\$65.42	\$83.23	\$129.18	\$241.24	19	\$60	\$76	\$95	\$4.39	11	\$38.73	\$56.30	\$91.07	\$118.04
South	70	\$48.89	\$59.71	\$69.58	\$83.19	97	\$49.56	\$61.06	\$76.33	\$107.46	100	\$44	\$52	\$75	\$103	74	\$42.43	\$57.14	\$81.42	\$12.37
Midwest	39	\$45.55	\$60.26	\$69.66	\$101.52	48	\$48.76	\$60.33	\$76.24	\$118.01	48	\$57	\$66	\$78	\$151	67	\$54.39	\$65.31	\$89.35	\$126.31
West	28	\$42.72	\$61.79	\$74.13	\$100.35	30	\$35.28	\$50.34	\$75.57	\$104.97	38	\$53	\$75	\$106	\$148	14	\$35.33	\$67.30	\$108.74	\$117.66
Cardiac	90	\$48.74	\$61.62	\$69.66	\$82.54	115	\$48.37	\$61.74	\$80.61	\$119.46	115	\$46	\$57	\$75	\$100	93	\$47.21	\$61.40	\$89.85	\$126.31
Vascular	65	\$49.03	\$60.97	\$83.19	\$117.01	80	\$48.76	\$61.97	\$82.13	\$129.18	90	\$51	\$67	\$99	\$167	73	\$51.09	\$63.13	\$81.42	\$17.66

TABLE 4: PHYSICIAN PRODUCTIVITY – SURGERY

	2015					2016					2017					2018				
	N	25%	50%	75%	90%	N	25%	50%	75%	90%	N	25%	50%	75%	90%	N	25%	50%	75%	90%
3-4-0100 Work RVUs per Surgeon	161	6,612	9,164	13,411	16,970	196	6,407	9,075	13,133	17,077	221	5,208	9,227	13,041	17,373	299	5,805	8,471	12,749	18,746
Ownership Model																				
Private	35	4,405	9,317	14,153	18,678	37	7,340	12,100	16,513	26,471	22	10,114	11,271	14,347	18,499	15	9,695	11,108	13,503	29,000
Cardiac	20	5,212	10,045	13,979	18,678	21	7,340	12,100	18,895	24,759	12	10,114	11,131	13,007	22,512	10	9,695	11,072	16,034	29,000
Vascular	15	2,973	7,429	14,153	15,349	16	7,170	11,857	15,608	26,471	10	4,191	11,468	14,347	15,103	5	9,880	11,108	12,420	12,749
Integrated	126	6,820	9,143	12,746	16,970	159	6,066	8,788	12,494	16,103	199	4,869	8,871	12,957	17,373	284	5,617	8,326	12,734	18,738
Cardiac	71	7,043	9,835	14,604	18,960	93	6,657	9,029	13,459	17,077	114	5,892	9,625	14,131	19,725	159	6,030	9,638	14,157	20,744
Vascular	55	5,386	8,291	11,061	15,528	66	4,988	8,588	11,768	13,628	85	4,005	7,783	11,059	15,246	125	5,351	7,915	10,473	15,252
Geographic Breakdown																				
Northeast	18	6,034	7,339	8,466	10,164.12	20	2,329	7,020	8,612	10,608.82	24	6,643	7,754	9,860	13,656	24	4,855	7,199	8,754	15,274
South	66	6,976	9,941	13,638	18,960.35	93	6,657	9,305	13,513	19,515.63	108	4,514	9,363	13,604	19,119	150	5,814	9,205	13,414	19,347
Midwest	45	7,846	10,324	14,414	15,879.28	53	8,094	11,649	13,985	16,598.12	49	7,783	10,623	13,359	15,391	82	6,753	9,194	12,985	16,969
West	32	4,405	7,043	10,598	16,151.76	30	5,669	7,045	11,857	13,389.83	40	4,008	6,900	12,790	16,672	43	4,649	6,903	11,108	20,894
Cardiac	91	6,976	9,941	14,604	18,960	114	6,660	9,075	13,690	18,620	126	6,336	10,114	14,131	19,746	169	6,314	10,032	14,157	21,058
Vascular	70	4,405	8,206	11,473	15,349	82	5,669	9,071	12,494	15,887	95	4,005	8,047	11,468	15,246	130	5,471	7,956	10,868	15,170

Unless otherwise indicated, the data in this survey filter to full-time providers as indicated by the respondents.

*Insufficient sample size

TABLE 5: APP COMPENSATION

	Cardiology					Cardiac Surgery					Vascular Surgery				
	N	25%	50%	75%	90%	N	25%	50%	75%	90%	N	25%	50%	75%	90%
3-5-0500 Actual Compensation per APP	1,121	\$84,269.75	\$104,850.00	\$120,000.00	\$136,152.50	97	\$103,780.00	\$131,510.00	\$157,713.92	\$181,457.68	60	\$98,940.00	\$109,369.00	\$140,000.00	\$148,199.02
Ownership Model	256	\$67,073.00	\$100,114.00	\$116,734.00	\$137,132.00	1	\$118,132.00	\$118,132.00	\$118,132.00	\$118,132.00	0	\$0.00	\$0.00	\$0.00	\$0.00
Integrated	865	\$84,626.00	\$105,696.00	\$120,200.00	\$136,152.50	96	\$102,314.00	\$131,510.00	\$157,713.92	\$181,457.37	60	\$98,940.00	\$109,369.00	\$140,000.00	\$148,199.02
Geographic Breakdown	180	\$74,063.00	\$100,508.00	\$115,000.00	\$125,054.00	2	\$114,358.00	\$114,358.00	\$140,000.00	\$140,000.00	16	\$124,946.00	\$140,000.00	\$140,000.00	\$189,586.00
South	525	\$84,190.00	\$103,579.00	\$119,355.00	\$134,683.33	40	\$89,958.67	\$123,379.15	\$145,595.57	\$172,552.00	18	\$101,648.10	\$117,274.81	\$148,199.02	\$176,763.00
Midwest	310	\$88,835.00	\$106,238.45	\$122,335.00	\$136,018.00	44	\$105,000.00	\$125,000.00	\$143,208.00	\$171,858.42	25	\$93,153.75	\$100,784.53	\$107,657.00	\$125,000.00
West	106	\$91,435.00	\$107,790.00	\$130,863.84	\$143,060.89	11	\$174,900.00	\$194,205.92	\$195,659.60	\$195,755.14	1	\$128,107.00	\$128,107.00	\$128,107.00	\$128,107.00

TABLE 6: APP PRODUCTIVITY

	Cardiology					Cardiac Surgery					Vascular Surgery				
	N	25%	50%	75%	90%	N	25%	50%	75%	90%	N	25%	50%	75%	90%
3-4-0100 Work RVUs per APP	1,136	280	918	1,825	2,770	133	39	127	348	702	47	99	284	553	1562
Ownership Model	189	164	954	2,182	3,241	2	405	405	702	702	0	0	0	0	0
Integrated	947	281	902	1,718	2,698	131	35	114	345	588	47	99	284	553	1592
Geographic Breakdown	156	163	856	1,606	2,335	18	139	257	448	518	7	35	99	290	553
South	572	169	720	1,767	2,716	55	50	142	564	940	15	23	206	467	818
Midwest	284	374	1,100	1,933	3,013	32	64	227	316	493	16	222	533	1562	1715
West	124	584	1,145	2,104	2,906	28	5	15	54	348	9	179	261	320	486

Unless otherwise indicated, the data in this survey filter to full-time providers as indicated by the respondents.
 *Insufficient sample size

TABLE 7: NON-CLINICAL COMPENSATION PER FTE

	2017				2018			
	25th	50th	75th	90th	25th	50th	75th	90th
Leadership Positions	\$1,814	\$4,924	\$12,842	\$17,156	\$1,767.00	\$3,973.00	\$5,202.00	\$12,459.00
Medical Directorships	\$2,021	\$4,567	\$17,245	\$29,731	\$2,469.00	\$6,306.00	\$14,315.00	\$24,600.00
Call Coverage	\$12,638	\$24,352	\$39,429	\$68,361	\$12,511.00	\$20,186.00	\$46,830.00	\$68,133.00
Hospital/Health System Incentive Earned	\$14,279	\$20,135	\$38,812	\$55,313	\$2,879.00	\$17,652.00	\$50,886.00	\$64,173.00
Hospital/Health System Incentive Available	\$27,907	\$36,390	\$61,946	\$67,434	\$2,879.00	\$45,952.00	\$58,337.00	\$68,368.00
Percent of Available Hosp Incentive Earned	72%	93%	100%	113%	81%	92%	100%	100%
Non-Governmental Payor Incentives Earned	\$327	\$1,432	\$19,334	\$28,628	\$244.00	\$2,154.00	\$6,658.00	\$11,920.00
Non-Governmental Payor Incentives Available	\$29,002	\$29,002	\$29,002	\$29,002	\$6,726.00	\$6,726.00	\$6,726.00	\$6,726.00
Total Non-Clinical Compensation Earned	\$26,492	\$38,812	\$72,173	\$102,397	\$16,663.00	\$33,450.00	\$63,550.00	\$90,545.00
Percent of Non-Clinical Compensation to Total Compensation	5%	7%	13%	16%	3%	7%	11%	16%

TABLE 8: NON-CLINICAL COMPENSATION PER FTE

	2014	2015	2016	2017	2018
Leadership Positions	\$6,667	\$9,632	\$3,730	\$4,924	\$3,973.00
Medical Directorships	\$11,869	\$8,481	\$7,963	\$4,567	\$6,306.00
Call Coverage	\$22,853	\$22,856	\$19,943	\$24,352	\$20,186.00
Hospital/Health System Incentive Earned	\$22,046	\$22,463	\$23,579	\$20,135	\$17,652.00
Hospital/Health System Incentive Available	\$30,000	\$41,667	\$37,697	\$45,667	\$45,952.00
Percent of Available Hosp Incentive Earned	80%	88%	84%	93%	92%
Total Non-Clinical Compensation Earned	\$45,457	\$37,685	\$45,482	\$38,812	\$33,450.00
Percent of Non-Clinical Compensation to Total Compensation	8%	7%	8%	7%	7%

Unless otherwise indicated, the data in this survey filter to full-time providers as indicated by the respondents.

TABLE 9: CLINICAL NET REVENUE AND COMPENSATION TABLES

Measure	2018					Median
1000-5-3500 Total CPT Revenue	N	25%	50%	75%	90%	2018
Cardiology Total	50	\$644,927	\$906,944	\$1,194,516	\$1,643,192	\$906,944
Integrated	28	\$613,711	\$774,203	\$906,944	\$1,189,137	\$774,203
Private	22	\$980,739	\$1,301,662	\$1,643,192	\$2,045,099	\$1,301,662

Measure	2018					Median
1000-5-3500 Total CPT Revenue	N	25%	50%	75%	90%	2018
Cardiac Surgery Total	12	\$696,339	\$868,890	\$928,985	\$1,353,068	\$868,890
Integrated	10	\$696,339	\$868,890	\$928,985	\$1,353,068	\$868,890
Private	*	*	*	*	*	*

Measure	2018					Median
1000-5-3500 Total CPT Revenue	N	25%	50%	75%	90%	2018
Vascular Surgery Total	11	\$531,568	\$803,349	\$1,704,975	\$2,003,709	\$803,349
Integrated	9	\$531,568	\$744,400	\$1,293,871	\$1,704,975	\$744,400
Private	*	*	*	*	*	*

Measure	2018					Median
1000-5-3600 Percent of Total Physicians Compensation to Total CPT Revenue	N	25%	50%	75%	90%	2018
Cardiology Total	46	48%	59%	88%	103%	59%
Integrated	27	63%	86%	101%	115%	86%
Private	19	40%	47%	54%	59%	47%

Measure	2018					Median
1000-5-3600 Percent of Total Physicians Compensation to Total CPT Revenue	N	25%	50%	75%	90%	2018
Cardiac Surgery Total	12	72%	96%	109%	142%	96.00%
Integrated	10	87%	102%	114%	142%	102.00%
Private	*	*	*	*	*	*

Measure	2018					Median
1000-5-3600 Percent of Total Physicians Compensation to Total CPT Revenue	N	25%	50%	75%	90%	2018
Vascular Surgery Total	10	42%	45%	101%	102%	69%
Integrated	8	39%	78%	101%	113%	78%
Private	*	*	*	*	*	*

Unless otherwise indicated, the data in this survey filter to full-time providers as indicated by the respondents.

ABOUT THE AUTHOR



Joel Sauer, MBA
Executive Vice President,
Consulting

Since 2010 Joel Sauer has been providing consultative services around the country to accelerate the value transition in healthcare, particularly within the cardiovascular realm. A significant area of concentration has been creating contemporary and effective physician/hospital partnership structures, utilizing employment and other contractual arrangements (such as professional services agreements) and joint ventures. His work includes full-service line advancement, including governance and leadership development, and the creation of targeted co-management programs. Joel is an expert in vision and strategy setting, cultural and operational integration, and physician compensation plan design that promotes the vision and objectives of the organization.

Prior to consulting, Joel spent 14 years as Chief Executive Officer of a large Midwestern multi-specialty physician group that included 23 cardiologists. In 2008 Joel led his group through acquisition by a major health system and then took over as CEO of its entire physician enterprise, which eventually included nearly 500 providers.

A recognized national resource on cardiovascular physician compensation, Joel is author of the annual *MedAxiom Provider Compensation and Production Survey* and has expertise in provider workforce planning and development. Along with the entire MedAxiom Consulting team, he has expertise in new federal payment models such as the Quality Payment Program and the Bundled Payments for Care Improvement Advanced, and other episode-based payment arrangements. Joel is often published in healthcare magazines, blogs and trade journals, and is a regular speaker at national healthcare meetings.

You may contact Joel at jsauer@medaxiom.com.

GLOSSARY

Advanced Practice Providers (APP) Compensation

(no benefits):

- Compensation for All APP's (no filter for full or part-time)
- APP wages reported as direct compensation on a W2

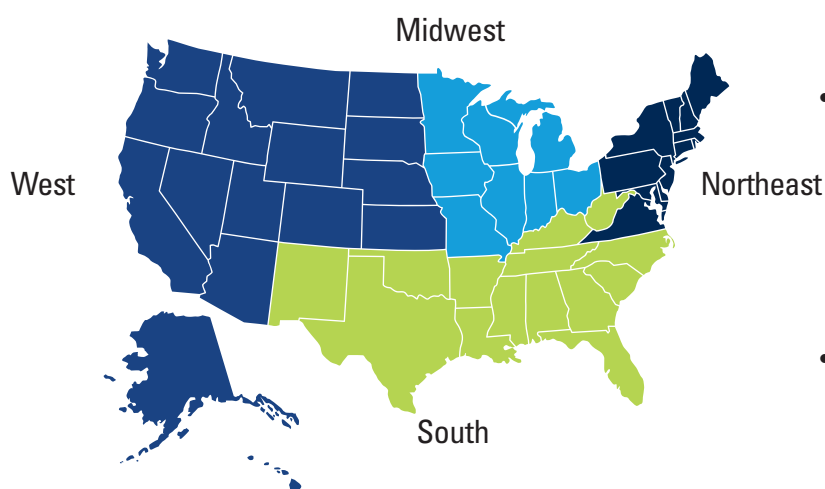
Advanced Practice Providers (APP) Sub-Specialty:

- Categorized as APP-Cardiology, APP- Cardiac Surgery, or APP-Vascular Surgery based on the most time spent.

Full-Time Physician:

- A full-time equivalent (FTE) physician works whatever number of hours per week the practice deems a normal work week (i.e., 37.5, 40, 50 hours, or some other standard).

Geographic Areas [Figure 4, Cardiology]



Northeast: CT, DC, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, VA

South: AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX, WV

Midwest: IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI

West: AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY

Internal Distribution Model

- The methodology used for splitting the available compensation pool to the individual physicians
- 100 percent equal share (pro rata split per physician)
- 100 percent productivity (pro rata share by some production measure, such as wRVUs)
- Blended (a combination of the two above)
- Salary plus bonus (fixed base plus some incentive payment)

Non-Clinical Compensation:

- **Leadership Positions**
 - Payments not at risk for performance, such as time or stipend-based chair positions and administrative leadership positions (CMO, CMIO, CVSL Director, etc.).
- **Medical Directorships**
 - Payments not at risk for performance, such as time or stipend-based directorships (cardiac rehab, cath lab, EP lab, non-Invasive imaging, etc.).
- **Call Coverage**
 - Call pay for STEMI, general, outside facilities, etc. This is not the value ascribed to call for internal distribution purposes, rather additional compensation from a third party (hospital, health system, etc.) specifically identified and valued for call.
- **Hospital/Health System Incentive Compensation**
 - Includes non-production performance (at risk) payments for improvements to quality, service and cost, co-management incentives, VBP, gain sharing, administrative incentives, etc.
- **Commercial (Non-Governmental) Payer Incentive Compensation**
 - Includes non-clinical performance (at risk) payments for improvements to quality, service and cost, coding and documentation, etc.

GLOSSARY CONT.

Ownership Models [Figure 2, Cardiology]

- **Private Practice:** An organized corporate model where the physicians are shareholders, or where one or more physicians own the practice and employ other physicians or providers.
- **Integrated (Employed and PSA) and Academic:** Physician services are legally tethered to a hospital or health system via employment or through a contract such as a professional services agreement.

Physician Actual Compensation (*no benefits*) [Figure 1, Cardiology]

- Compensation for full-time physicians
- Physician wages reported as direct compensation on a W2 includes, but is not limited to, the following forms of income:
 - Call coverage
 - Co-management
 - Medical directorship
 - Bonus
 - Research
 - Incentive payments

Physician Actual Compensation (*no Benefits*) per wRVU:

- Physician's reported W2 compensation divided by the calculated wRVUs reported by the CPT submission.

Physician Sub-Specialty [Table 1; Figure 3, Cardiology]

- A classification for physician specialty/subspecialty 50 percent or more time is spent on:
 - Electrophysiology
 - Invasive
 - General/non-invasive
 - Interventional
 - Advanced heart failure
 - Cardiac surgery
 - Vascular surgery
 - Other cardiovascular (*all providers not in the above*)

Work Relative Value Units (RVUs):

- The Omnibus Budget Reconciliation Act of 1989 enacted a Medicare fee schedule. As of 2018, about 7,000 distinct physician services are listed. Based on classifications created by the American Medical Association under the Current Procedural Terminology (CPT) system each service in the fee schedule is assigned a value under the resource-based relative value scale (RBRVS).
- For each CPT code, a payment formula contains three RVUs: one for physician work, one for practice expense, and one for malpractice expense. This measure considers only the work RVU.
- No adjustments are made for APP activities
- Zero wRVUs are given to CPT codes with the following modifiers (*no adjustments made*):
 - AS
 - 80
 - 81
 - 82
 - 50
- Work RVUs included for all professional and surgical services performed by providers

“ I find the MedAxiom Cardiovascular Provider Compensation & Production Survey Report to be very valuable as we review trends and see how our group's compensation and production levels measure up with our peers. It provides us with a comprehensive resource as we plan and make decisions for the upcoming years. ”

JONATHAN FIALKOW, MD
CHIEF POPULATION OFFICER
BAPTIST HEALTH SOUTH FLORIDA
CORAL GABLES, FL

“ Negotiating compensation arrangements is challenging for many reasons. Comprehensive, trustworthy data upon which informed decisions can be made is an absolute requirement for the process to be successful. We find MedAxiom's Cardiovascular Provider Compensation & Production report to be an extremely useful tool to draw upon. ”

WILLIAM A. GIUDICE
CHIEF FINANCIAL OFFICER
TALLAHASSEE MEMORIAL HEALTHCARE
TALLAHASSEE, FL



MEDAXIOM
AN ACC COMPANY

2300 Marsh Point Road, Suite 200
Neptune Beach, FL 32266

904-249-1880

    @medaxiom

MEDAXIOM.COM