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# Financial Models for an Academic Practice in Plastic Surgery

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**Background:** In an attempt to investigate physician compensation in academic practice, financial reimbursement models of departments and/or divisions of plastic surgery within an academic university setting were evaluated.

**Method:** Thirteen divisions or departments of plastic surgery were surveyed to obtain information regarding reimbursement models for plastic surgery.

**Results:** Of the 13 plastic surgery groups surveyed, 11 were divisions within the department of surgery. The department chairs/chief and/or chief administrative officers were questioned regarding the following areas: (1) total compensation, (2) bonus and incentive compensation models, and (3) cosmetic and cash reimbursement. There were no regional differences that could be identified. As such, we grouped institutions into Western, Midwest, and Eastern regions. COVID-19 did not change any of the financial models that were established before the pandemic.

**Discussion:** There is no ideal model for compensation, which varied among the institutions surveyed. All of these financial models were established before COVID-19 and did not significantly change with the pandemic. It appears that within this small sample size, compensation is based mainly on a \$/wRVU model. Funding for research and educational teaching remains a challenge, which is not reimbursed well. Although faculty compensation may vary based on the institutions, the decision to enter and remain in academic practice includes a series of decisions. However, compensation is a significant factor, which should not be minimized. (*Plast Reconstr Surg Glob Open* 2023; 11:e4753; doi: [10.1097/GOX.0000000000004753](https://doi.org/10.1097/GOX.0000000000004753); Published online 13 January 2023.)

## INTRODUCTION

Academic practices have changed over the last three decades. Mission statements capture and express the heart and soul of an organization and may be defined around function or strategic direction. Mission statements may offer an organization definition of vision and values, and it may articulate the inner calling or vocation to pursue an activity or perform a service. In all cases, mission statements ultimately attempt to answer one question: what does an institutional organization seek to achieve? Traditionally, there have been three major missions of an academic institution, which includes the clinical, research, and teaching efforts. With decreasing budgetary support from federal and state governmental

authorities for both research and teaching, clinical dollars have become more important in providing the engine to drive the multiple missions required for an academic institution.<sup>1-13</sup>

Historically, these three missions became the tripod for the triple threat surgeon. Whether it was even possible for more than a small number of productive and highly efficient individuals to achieve excellence in all three activities, the triple threat has in recent years become endangered. Academic institutions have suffered from a lack of nimble ability to outpace the economic changes in the health care environment. Up to 10% of many of the academic medical center's revenues have been at risk even before the COVID-19 pandemic.<sup>2,13</sup> However, no one could expect the significant economic pressure placed on the health care environment and system secondary to the COVID-19 pandemic.<sup>1-13</sup> Ultimately, institutions are looking for ways to combine faculty and profee billing to leverage the benefits of both, depending on insurance

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reimbursement. This, along with a structured funds flow transfer to the schools of medicine helps to ensure the three missions of the institution.

For those residents coming out of programs, approximately 35% start out in academics. Many leave within the first 5 years because of a variety of pressures and stresses, several of which are financial. In an attempt to strive for one reason (financial) why physicians select to leave academic practice, and to evaluate potential financial reimbursement changes in academic medical centers secondary to COVID-19, we decided to spot-check financial reimbursement models of a small segment of departments and/or divisions of plastic surgery within an academic university setting. Administrators in academic surgery participated on a voluntary basis. There is no one academic model that fits all medical centers but there are some common trends that this article will attempt to address. It is anticipated that by understanding better compensation methodologies within the departments/divisions of plastic surgery academic medical centers, physicians looking for academic positions can understand compensation models before accepting a job, which may help in understanding financial remuneration as well as assist with potential retention.

### METHODOLOGY

Eleven divisions and two departments of plastic surgery were surveyed to obtain information regarding reimbursement models for plastic surgery. Institutions were randomly selected and included seven institutions in western states, four in the Midwest, and two on the East Coast. Because of the potential sensitivity of the information, the institutions were not individually named. Information was voluntarily provided through personal phone conversations. These 13 institutions served as a spot check of varying sizes of divisions/departments and selected for the ease of obtaining information from the chief administrative officer/department administrator or the division/department chief/chair. Information was correlated into three large main groups (Table 1). Further information was gathered from literature searches, national organizations aligning academic medical centers, and administration and hospital financials. Finally, the small sample size, as well as the variability in data, negates a formal statistical analysis; however, we have presented our data for better evaluation of the collected information. (See figure, Supplemental Digital Content 1, which

### Takeaways

**Question:** We reviewed physician compensation in divisions/departments of plastic surgery within an academic university setting.

**Findings:** Of the 13 groups surveyed, 11 were divisions and two were departments of plastic surgery. Three major areas of focus were reviewed. In all but three plastic surgery departments/divisions, compensation was based mainly on a \$/wRVU model.

**Meaning:** There is no ideal model for compensation which varied among the institutions surveyed. Funding for research and educational teaching remains a challenge, which is not reimbursed well.

shows the demographics of data collection, <http://links.lww.com/PRSGO/C340>.)

### RESULTS

Data were broken down into three major areas: (1) total compensation, (2) bonus and incentive compensation models, and (3) cosmetic and cash reimbursement. A flow chart is presented in Figures 1 and 2 identifying a summary of funds flow.

#### Total Compensation

All plastic surgery programs except for three were compensated through a base salary plus bonus scheme, with relative value unit (RVU). One institution remained on a profit/loss (P&L) basis, one based on compensation on Association of American Medical Colleges (AAMC) mean salary based on academic rank and location within the United States, and one had all of the faculty leave due to a lack of RVU compensation. RVU determines physician payments based on the level of difficulty of a procedure or patient evaluation. It is a neutralized way to quantify and compare the productivity of physicians because it eliminates variables such as fee schedules or geographical costs. A work relative value unit (wRVU) considers the complexity of each interaction. This is normally averaged over a 3-year period and is determined also by the location in the United States. The 3-year average benchmark from FY 20 to FY 22 is 8104 Medical Group Management Association (MGMA). The 50th percentile is 7230; 60th is 7654; and 75th is 9270. Areas

**Table 1. Questions Asked in Three Major Areas Regarding Compensation**

Total Compensation	Bonus and Incentive Structures	Cosmetic and Cash Reimbursements
How is total compensation determined?	How are clinical bonuses determined?	How are cosmetic and cash procedures incorporated into the compensation plan?
How is clinical effort reduced from involvement in administrative, educational, and research responsibilities?	Are there nonclinical incentives and if so, how are these determined (criteria) and paid?	What assessments, if any are attributed to cash and cosmetic cases?
How are overhead/assessments determined and accounted for?	Is there a cap on bonus payments?	What percentage of your clinical volume is cash/cosmetic?

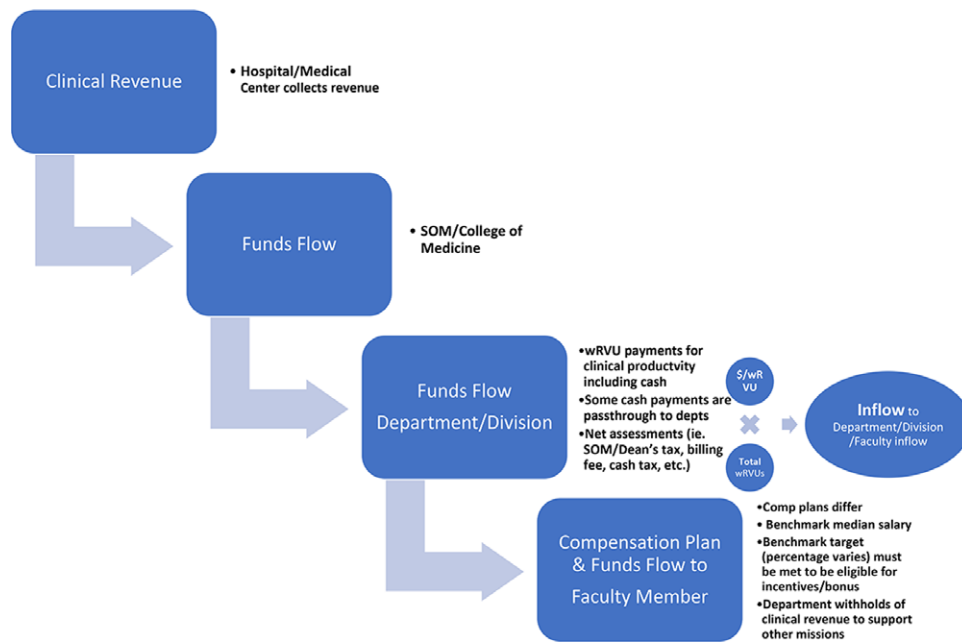


Fig. 1. Funds flow map.

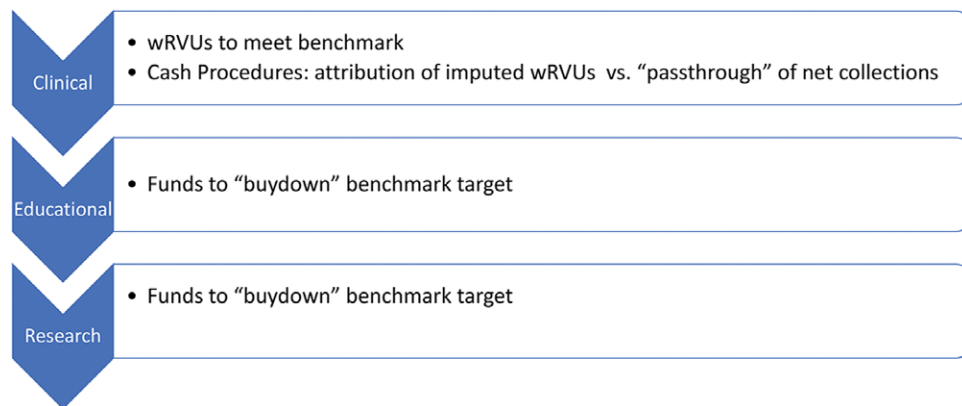


Fig. 2. Productivity model.

of more specialized plastic surgery services such as hand or craniofacial may vary from this average wRVU.<sup>10-12</sup> This model was new to almost all of the plastic surgery divisions/departments, with the most recent average implementations within the last 5 years. One academic center has been on the RVU model for 15 years, with a review and updates of the model every 5 years. All of the programs compensate faculty based on guidelines from the AAMC mean averages.<sup>10</sup> All programs in addition to the base salary provide a supplemental salary to make up the total salary with bonus and incentives. Thus, a base salary is given and a "negotiated" component is provided to make the total salary competitive with academic rank and the "market price" of an academic plastic surgeon determined by geographic location, rank, and AAMC salary data. Salary guarantees for newly hired faculty were commonly provided for the first 1 to 3 years

in practice. (See figure, Supplemental Digital Content 1, which shows the demographics of data collection, <http://links.lww.com/PRSGO/C340>.)

**Bonus and Incentive Compensation Models**

Payment schemes for wRVU productivity over the target and incentive compensation models varied widely among the programs. The average range of \$/wRVU is \$35-60. Upon implementation of an RVU performance system, the concern for all the units remained that the mechanics of funding must be identified clearly while maintaining budget neutrality. Concerns regarding financial support from the university and/or health systems remained a common issue for all. Funds essential to provide a buydown of clinical time effort for faculty for education and research were variable. None of the institutions surveyed offered buydown funds for research or

teaching unless the faculty member was directly involved in resident education administration such as program director or was able to obtain grants. To combat the dwindling monetary support for these other initiatives, all programs have chosen to withhold varying percentages of clinical income. As explained later, the idea of withholding income allows the department/division to maintain a budget neutrality while utilizing dollars to support unfunded nonclinical missions or hedge if shortfalls in clinical income occur. One program still functioned under a traditional profit and loss model and paid a percentage of the profit to the surgeon with the remainder going back to the department. The most common percentage split of overage payment (bonus) was a 70 of 30 model, where 70% is paid out to the faculty and 30% goes back to the department to be reinvested for future use supporting various missions of the organization. Only one program offered the potential for 100% bonus earning providing the division/department was financially solvent. Three programs withheld anywhere from 10% to 20% of the overage, which is then paid out incrementally: semiannually, quarterly, or all at year-end. One group paid monthly productivity bonuses with a year-end payment of academic incentive bonuses (based on good standing within the group). (See figure, Supplemental Digital Content 1, which shows the demographics of data collection, <http://links.lww.com/PRSGO/C340>.) All programs in addition to withholding a portion of salary or bonuses also included taxes to the department/division, which affected total faculty income.

#### Cosmetic and Cash Reimbursement

Reimbursement for cosmetic and cash cases also demonstrated great variability. Over half of the programs had some form of “carve out” for cash business, where cash was considered separate from wRVU reimbursement. Of this cash collection, there appeared to be at least 100% of some form of taxation to this income either by the department/division or the enterprise. At least two programs assigned imputed wRVU values for cosmetic current procedural terminology codes. This assigns a wRVU for cosmetic cases, cash, and carve out procedures. This can be assigned by the department/divisions or the clinical enterprise. If no codes are available, a “dummy” code is created and an RVU is assigned to the procedure. These were procedures that normally would have paid cash to the division or department. With the assignment of wRVUs to these procedures, programs found it difficult to truly reimburse and compensate the surgeon for their effort for cash payments. One program lost all faculty due to a lack of a reasonable cash reimbursement model. The majority of the institutions surveyed recognized that assignment of imputed wRVUs does not truly capture the value of cosmetic procedures. A few institutions did not perform many cosmetic and or cash procedures due to their patient population but did have robust reconstructive practices. (See figure, Supplemental Digital Content 1, which shows the demographics of data collection, <http://links.lww.com/PRSGO/C340>.)

Finally, all of the institutions surveyed had these reimbursement models in place pre-COVID-19. As such, implementation and evaluation of the models at these institutions had time to “run and work” before the pandemic.

## DISCUSSION

The review has attempted to outline basic compensation models utilized by academic medical centers for divisions and departments within plastic surgery in the United States. The article is not meant to be all inclusive but a starting point as we continue to evolve from the COVID-19 pandemic and the extensive financial stress that has been placed on academic medical centers. It can also serve as guidance for chairs and chiefs to understand various financial compensation models.

Traditionally, physician reimbursement has been primarily based on a profit and loss component. This assumes that collections minus expenses, including salary and overhead, leave either a profit or loss. Each division chief and/or department chair would utilize this profit or loss to their discretion based on whatever compensation plan they had developed for either bonuses or adjustment to salaries. But physician reimbursement has moved to a productivity-based compensation plan in most institutions. Those faculty members who spend more effort in research or education may feel “left out” unless some form of compensation is included for these other critical aspects in the academic medical center mission. Much of this is due to decreased federal and state funding, which has become subsidized by clinical revenue.<sup>1-5</sup>

Newer approaches try to design compensation plans as a balance between the competing but critical missions of research and education. Linking benchmark salaries with benchmark productivity targets each individual faculty member, determining his or her compensation. If productivities are not met, salary adjustments can occur. If productivity benchmarks are exceeded, then bonuses may be paid out on an individual basis. The amount of bonus as well as the expectation over exceeding a benchmark will be based on each individual division and/or department. Faculty concentrating on research and education administration can have their time and benchmarks “bought down” by the division/department/institution and, thus, in essence compensate for these critical parts of the overall mission. This is a mechanism to then help fund these research and teaching areas.

#### RVU Model

As demonstrated in the data collected, most compensation plans were based on an RVU model, where a dollar per work RVU productivity is set. The RVU is a measurement used by the resource-based relative value scale that forms the basis of the centers of Medicare and Medicaid services fee schedule. The RVU is used to determine the monetary value for services using a formula accounting for work practice expenses and malpractice costs. Geographic considerations and annual updated conversion factors



determined by centers of Medicare and Medicaid services are applied to these variables to calculate a dollar amount per RVU. At the time it was developed, the RVU was a better alternative than the prevailing “fee for service” model for reimbursement where rates were based on local community standards. The wRVU is now part of a daily lexicon for health care providers, and every current procedural terminology code has an assigned wRVU.<sup>1-5</sup> For academic medicine, the wRVU model has certain advantages. It makes income more competitive for academic providers compared with those in community practice. It encourages providers to fill schedules and potentially provide access to more patients. In theory, compensation based on clinical program activity rewards providers for their effort. Similar to the P&L fee for service model, the downside of the RVU culture is that it threatens the very mission of academic medicine, patient care, education, and research. Patient care is affected when there is incentive to value volume. It also fails to account for various labor-intensive tasks that are not necessarily monetary but still essential for quality care (conducting fact-finding meetings; completing administrative forms; communicating with consultants; attendance in division or department meetings; conferences; grand rounds; morning reports; lecturing; mentoring of medical students, residents, and fellows; publications; weekly laboratory meetings; and institutional representation in national and international conferences).<sup>1-13</sup>

#### The Education and Research Mission

There is evidence demonstrating that education and research are negatively impacted by wRVU-based compensation. In many institutions, these nonclinical activities are not additionally compensated for but are nonetheless expected. Development of a compensation model that does not discourage participation in education and research is critical. It may be argued that these activities are intrinsic motivators for being in academics and that the intangible benefits should be enough for the provider to accept lower pay than what they may get elsewhere. However, this argument may be rendered invalid in the current environment where an increasing amount of hospital revenue comes from clinical care translating into pressure to produce. Dissatisfaction with the current model results in young providers becoming exponentially disillusioned with academics after implementation of productivity targets. Restoring the mission of academic medicine requires reorganization of the existing compensation model. Furthermore, the wRVU may not be the best representative of procedure complexity or effort despite being annually updated. Many codes are not accurately representative of technology advances, which have drastically reduced procedural time. Some method of rewarding nonclinical work must also be devised. Different methods to reward education and research activities vary from institution to institution, including various research RVU, educational RVU, or administrative RVU. Incentives for research have been shown to increase research productivity. Moreover, increasing preceptor stipends to better compensate for teaching time significantly improves

preceptor retention, as noted by a recent study from Harvard Medical School.<sup>1-9</sup>

Adjusting both research and education efforts into an RVU or equivalent based on a 1 minus system target seems a reasonable option for reimbursement models in department and/or divisions of plastic surgery. Currently, in this system, the RVU benchmark for a given salary and rank is set at one, and then fractional clinical effort is subtracted from the one, leaving a fractional RVU to cover for education and research effort. Education and/or research productivity could bring down the requirement for clinical benchmarks, leaving extrafunding available for these particular areas. This might include program directorships, medical directorships, and other teaching assignments that would be directly paid and/or research grants. All of these would then reduce the potential benchmark for clinical productivity. For those faculty members not having any additional income for these specific areas, the division/department could help supplement at the end of the year with an overall bonus for each faculty member for these particular research and/or educational areas.

#### Salary at Risk

Another potential model to help fund research and educational missions demonstrates salary at risk, which requires a participating physician to reach a certain level of clinical or academic productivity to cover their salary. A common method is to pay a guaranteed base salary component with a percentage of the salary at risk. If a physician is purely on a clinical track, then his or her salary at risk would be based on individual clinical wRVU productivity. Thresholds for clinical wRVU productivity can be established for the year on a basis of national productivity data, which are available for all medical and surgical specialties done on a 3-year rolling average.<sup>10-12</sup> As such, a plastic surgeon earning a base salary would need to generate a certain amount of RVUs, which would translate into a dollar per wRVU compensated by the enterprise. Any clinical wRVU earned above this threshold may be rewarded with an additional bonus compensation, which could be the same amount of dollar per wRVU or a lower threshold of dollar per wRVU. If the benchmark wRVU is met, the additional withholding of salary would be paid. If not, a percentage of the withheld salary would be kept by the department based on key percentage of work over obtained versus expected. What all these systems do is provide the department and/or division some flexibility in maintaining a budget neutrality with the potential of still earning dollars for department carryforward and reserve funds. The division/department could then use this additional income to help fund the research and educational missions. Naturally, any formal research funding can also be used to help support salary lines, again “buying down” the benchmark for clinical productivity.

In summary, there is no ideal model for compensation. We know traditionally, however, that teaching medical students, residents, and fellows in both informal and formal settings; engaging in research; publications; grant writing activities; and speaking at local, regional, national, and international meetings are noncompensated. This is true

unless compensation occurs from obtaining grants and/or from the graduate medical education office supporting medical education. Compensation for research and/or education can also be given RVU values, and as such, helps the advancement of the faculty member in an academic environment. This is also true for lecturers as well as administrative duties. Regardless of what the methodology is, recognition and compensation for the research and education mission are critical.

#### Department/Cash Compensation

Department versus division becomes a more critical issue when we start discussing RVU-based compensation. Dollar values per RVU may be set for the entire department of surgery shorting a division of plastic surgery to maintain a budget neutrality for the entire department. Cash for cosmetic cases may be forced to go onto a dollar per wRVU mechanism, again limiting a faculty member trying to obtain the appropriate compensation for performing cosmetic cases. An advantage of a larger department of surgery, however, would be the potential for more flexibility with nonclinical dollars supporting the research and the educational mission. Hence, in our opinion, although biased, the necessity for departmental status for plastic surgery becomes even more critical in an environment moving toward a value-based compensation model.

#### CONCLUSIONS

All in all, there is no ideal job or compensation model. Although faculty compensation may vary based on the institutions, the decision to enter and remain in academic practice includes a series of decisions. However, compensation is a significant factor, which should not be minimized. Academic medicine is changing rapidly. It continues to be a source of fulfillment and excitement for those who want to remain in an environment that not only encompasses clinical acumen but also focuses on research and teaching. The ideal compensation probably will never be addressed, but trying to incorporate the tripartite mission of an academic medical center into a compensation-based model that can reward both research and teaching for those that are not a triple threat in plastic surgery is a critical value.

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