The Progression of Physician Compensation in Academic Medicine

Historical Professional Paper

Submission Date: August 9, 2013

This professional paper is being submitted in partial fulfillment of the requirements for election to Fellow in the American College of Medical Practice Executives.
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As academic practices face increasing economic pressures from various sources, including diminishing funding and increasing costs, several are forced to review and alter their mechanisms for faculty compensation. While reimbursement and productivity measures are tied primarily to clinical services, academic practices have a unique challenge in fulfilling their other missions, the majority of which are not easily quantifiable or reimbursed. As changes in healthcare force operational changes in academic settings, compensation plans must adhere to the practices’ mission and goals, while still providing some flexibility within the plan for the changing landscape of health care policy, regulations, and financing structure.

This paper will explore different types of physician compensation models and their application and prevalence in an academic setting over time. This paper will also identify what has been the impetus behind the changes in various models and what direction physician compensation is heading.

Data is derived from literature review and survey tools.

**Background**

Physician compensation models can range from a very simple base salary with potential for bonus to a complex incentive-based model driven by a myriad of factors.
These models can be applied to all types of practices, including academic practices; however, the applications and considerations for these models in academic medicine are different due to the necessity to motivate not only clinical performance, but also education and research. Generally, compensation for a physician in an academic setting lags behind compensation for his or her physician counterparts in similar specialties in the private sector.\(^1\) This is likely because money is not necessarily the primary motivator for many physicians practicing at a medical school, who often seek academic appointment because they prefer involvement in scholarly activity.\(^2\)

Several factors influence an organization’s adoption of a particular compensation model. Method of reimbursement and factors influencing payer sources, such as health care policy and the economy, can drive the physician compensation systems to incentivize preferred behaviors. Typically, practices tend to align their incentives not only with the mission of their own practice, but also with consideration for their revenue sources, such as a teaching hospital or external payer incentive source. As payers are transitioning from fee-for-service payment to quality or outcomes-based reimbursement, considerations for physician compensation are changing. For example, if the teaching hospital is able to improve its profitability through decreased readmissions or length of stay, they might provide an incentive-based program to reward physicians through their funds flow mechanism. In addition, the practice governance model and faculty physician participation is a key consideration, specifically
for buy-in of a compensation plan. For example, if a practice plan of an academic center has potential to earn additional revenue through attestation of meaningful use of an electronic health record or the Physician Quality Reporting System (PQRS), a portion of that incentive paid directly to the physician may be considered.

Academic practices face unique issues when evaluating and applying a physician compensation method. Academic medical centers are required to fulfill a multi-pronged mission, including patient care, education of medical students and residents, and research. Several academic centers also consider citizenship, community roles, and administrative functions as part of their overall mission. As a result, all faculty must allocate their resources, including time, across these variable missions. In addition, fulfillment of these multiple roles depends on income from alternative sources such as third-party payer contracts, grants, state and federal funding, funding from hospital, and philanthropic support. Other factors unique to academic centers require protected faculty time such as program directorships of graduate medical education programs and research effort. Therefore, a consideration for faculty reimbursement and benchmarking must include not only patient care activities; but also allow a means for calculating effort spent in activities other than patient care, such as research and education. Academic practice plans must also regard expense allocations unique to a medical school and politics within the institution. For example, although a non-academic medical group practice may have centralized expenses for business office or
central administration, academic medical centers have additional expenses, such as taxation, which is a percentage of collections that flow back up to the institutional level and are often distributed at the discretion of the Dean or President of the medical school or academic institution.

The organizational model, governance and subsequent business relationship of an academic health center and its primary teaching hospital can also impact how physician compensation is determined. These primary models include: (1) an integrated model, in which all functions report to a single individual and board and (2) a split model, where the academic and clinical operations are managed by multiple individuals reporting to different governing boards. There are several variations on each type. This relationship impacts the structure of the practice income plan, and as a result, control over physician compensation. Aside from the organizational foundation, a medical school may be public or private. Public schools often have additional layers of bureaucracy as a result of their non-profit or government status. Either of these types of institutions may face a unique dynamic of internal politics and attentiveness to community perception, particularly as it relates to funding sources.

It is essential a compensation plan adhere to the legal considerations pertaining to how physicians can be remunerated. Section 1877 of the Social Security Act (42 U.S.C. 1395nn), commonly referred to as the “Stark Law” or “Physician self-referral Law”, prohibits physicians from referring Medicare patients for designated health
services (DHS), such as imaging or laboratory testing, to an entity with which the physician or member of the physician’s family has a financial relationship, unless it meets the requirements for a statutory or regulatory exception. This law consequently has a significant effect on the compensation structures and financial relationships between physicians and other healthcare providers, such as hospitals and comprehensive healthcare delivery systems, despite the exception for academic medical centers that meet certain criteria. In other words, these imposed regulations have the potential to restrict the supportive relationship between the teaching hospital and the physician practice, which impacts how funds flow through the practice plan, and subsequently to the physician. The Stark Law and others, such as the Health Insurance Portability and Accountability Act of 1996 (HIPAA) have resulted in increased overhead expenses over time related to technology and personnel, which can influence compensation, as these costs have an impact on the net income for the organization and the individual physicians. The Centers for Medicare and Medicaid Services (CMS) also has published rules related to billing regulations specific for teaching physicians. The adoption of these guidelines affects the number of patients that can be seen, billing level of Current Procedure Terminology (CPT) code billed for primary care, and documentation requirements.

Funds flow and the structure of the practice plan in an academic setting is a key determinant in how an organization pays its physicians. Funds flow includes monetary
resources received from the federal government for post graduate training. Medicare
distributes these monies in the form of Direct Graduate Medical Education (DGME)
payments or an Indirect Medical Education (IME) adjustment to their reimbursements
to the hospital. Payments are also made to the faculty physicians through the practice
plan for billed services, including the physician’s professional charges. Institutions vary
widely in funds flow management. In addition, there is often cross-subsidization within
a department or within a school of medicine in which physicians and medical specialties
with higher reimbursements and production support areas which typically operate at a
loss, either through allocation of resources within a department or division or through
distribution of taxation funds, as indicated previously. According to the Association of
American Medical Colleges (AAMC’s) analysis of the categorization of annual revenues
across all U.S. Medical schools in 2007-2008: the clinical practice accounted for more
than half (53%) of the revenues. The next largest contributors were research grants and
contracts (29%), followed by hospital payments to the medical school or practice plan
(15%), support from the university and/or state and local government (6%), gifts and
earnings on endowment principal (5%), tuition (<4%), and the remaining from other
sources.

**Types of Faculty Compensation**

The basis of all compensation models is a continuum ranging from straight
salary, in which no compensation is at risk to 100% incentive-based reimbursement, in
which the entire salary is at risk. Based on literature review and survey data from the past 15 years, most academic compensation plans are categorized somewhere in between the two extremes, with variance among the plans. On one end of the continuum, straight salary, a physician is paid the same amount regardless of productivity, outcomes, or other measures of performance. The benefits of straight salary remain primarily with the physician, who can depend on consistent pay; however, this method can also benefit the patient in that monetary incentive does not influence the physician’s practice style. Disadvantages of straight salary plans include potential obstacles for recruiting new physicians, flat clinical productivity, and challenges in aligning behavior and productivity with departments goals. Alternatively, productivity-based incentive plans can provide the benefit of improving desired performance aligned with departmental goals, enhancing recruiting potential for faculty pursuing opportunities for additional revenue, and a structured means by which to measure individual and group productivity. Disadvantages of an incentive-based productivity plan include potential for decreased performance or lack of focus in particular area at the expense of an increased focus and resources utilized toward activities that are incentivized. According to Medical Group Management Association (MGMA) academic survey data: in 1998, 35.28% of respondents’ base salary comprised 100% of their total salary. In other words, 35.28% of physicians received only base salary, with no bonus or additional compensation. Meanwhile, 29.76% of the academic physician
respondents in the 2013 survey indicated that 100% of their base compensation comprised their total compensation.\textsuperscript{11} A comparison of those two time periods, could indicate either an increased opportunity for additional compensation, or more of the physicians’ salary is at risk. Although data varies from year to year, a trendline applied over the past 14 years does show a decrease in the number of academic physicians whose base compensation is equal to his or her total compensation.\textsuperscript{12,13,14,15,16,17,18,19} (Appendix A, Figure 1)

Historically, physician compensation models were a relatively simple combination of fixed salary and annual or semiannual bonus. Prior studies show that most large medical facilities adopted common compensation plans for all members, which were not as effective for faculty with greater diversity in their skillset and functions.\textsuperscript{20} Other literature shows that compensation philosophy in clinical departments is shifting from the belief that guaranteed salaries enable academic freedom to one that compensation plans incentivize productivity, which aids the practice to meet the goal of improving financial accountability in the organization and rewards to modify behavior.\textsuperscript{21}

In addition, salary plans which include incentive may reward individual behavior or results of the entire group. In order to achieve a group incentive, an academic practice or department may align individual efforts to achieve departmental success.\textsuperscript{22} In incentivizing success for the group, the formula considers the departmental goals and
assigns weights or values accordingly so that not only is an individual faculty member incentivized for productivity or achieving individual goals, but also for spending time in activities important to the department as a whole. Individual incentive rewards the individual physician based on their own individual production or profit and loss. The negative consequence of an incentive plan that rewards individual performances may actually undermine teamwork and encourage a short-term focus,\textsuperscript{23} rather than long-term strategic gain.

Several formulas exist for production-based compensation; however the goals are standardized: designate a portion of salary as at-risk; target other key performance indicators for the practice; motivate employees to generate more revenue; and link the highest compensation to the most productive faculty.\textsuperscript{24} The most common form of productivity incentive plans are based on collections, relative value unit (RVU), gross charges, number of encounters, research metrics, education metrics, or quality metrics. When MGMA started collecting this data in 2005 from academic practices, the most prevalent metric was \textit{collection for professional charges}, followed by \textit{number of RVUs}. According to the 2005 Survey data 36.10\% of academic departments and 35.40\% of faculty physicians utilized \textit{collections for professional charges} for their productivity-based compensation formulas. Compartiavely, in the 2013 MGMA Academic Practice Compensation and Production Survey for Faculty and Management, RVUs were the most untilized measure used in productivity-based compensation formulas, specifically
work RVUs at 58.39% of academic departments and 63.68% of faculty physicians.
(Appendix A, Figure 2)

The popularity of productivity-based compensation is an example of how academic medical centers are responding successfully to monetary pressures, while maintaining their focus on their core principals and visions. An advantage of productivity-based compensation is that there is an inherent disincentive to cancel clinics and an incentive to improve patient access, which would ultimately result in higher patient satisfaction. A potential drawback is that money may not be the primary motivator for the faculty physicians. Academic physicians typically earn less than physicians not in academics; therefore, the majority of physicians practicing in an academic setting are not primarily driven by financial gain, but rather academic pursuit or passion for teaching or research. Other disadvantages of this type of incentive were identified in a limited, single-site study. These included: decreased time with patients, a sense of declination in quality of care; likelihood of performing procedure with only a marginal indication, and a decrease in satisfaction in practicing academic medicine. In addition, potential negative impacts to nonclinical activities were determined, such as a decrease in time spent teaching and in research activities.

Clinical Productivity

The majority of academic practices utilize clinical productivity as their primary target for incentive-based compensation. This is supported by the MGMA Academic
Practice Compensation and Production Survey for Faculty and Management, as well as a recent survey of nineteen anonymous academic practices, which revealed 68.42% used work RVUs, 57.89% used patient care collections, followed by an equal number, 36.84%, using research and education metrics. (Appendix B)

Clinical Productivity can be measured in several ways, including gross charges, collections, relative value units, and number of encounters. Gross charges are the amounts a provider bills for patient care. Gross charges can correlate to volume and productivity, but do not take into account contractual write-offs, nor are they standardized among practices. Collections are monies received from billed charges related to patient care. Collections have a tangible financial value, as they are tied directly to clinical revenue; however collection rates can vary among practices and providers based on payer mix. Number of encounters relates to the number of visits in which a provider renders patient care. Like collections and charges, this measure can be correlated to volume and productivity, yet often shows large discrepancies among procedural specialties and primary care. A department may compensate a physician based on their profit-and-loss statement, which is based on the department’s revenue and expense allocation methodologies. A downside to this method is that the physicians’ incentive is dependent on the department’s successful management of expenses to budget. As a result, the incentive can be minimized if there are unforeseen
or larger than expected expenses for the entire department, such as departure of another physician. 27

Relative value unit (RVU) is yet another means by which to measure clinical productivity. RVUs are standardized measures of clinical work that can be used to calculate productivity, and are scaled based on resources used to provide a service. Work RVUs account for a provider’s time, technical skill and effort, mental effort and judgment, and stress to provide a service. Total RVUs include the work RVU component; a practice expense RVU, which accounts for the nonclinical and non-physician labor of the practice, building space, equipment and office supplies; and professional liability insurance RVU, which is related to the cost of malpractice insurance premiums. 28 Work RVUs tends to be a more standardized measure, whereas total RVUs can vary with geographic location. A compensation model can set a threshold RVU target based on published RVU benchmarks, or a practice may decide to benchmark internally based on historical data. It is critical to be familiar with the benchmark source and to define a faculty physician’s clinical full time equivalent (FTE) or percent of time devoted to clinical activity when utilizing benchmarks so that a faculty devoting 67% of effort to clinical work is not unfairly held to the same standard as a private practitioner with 100% clinical effort. The benefit of an RVU-based model to one based on collections is that it eliminates internal competition for select patients, such as preferred payer mix, and rewards providers for providing access. 29
An academic department may recognize and reward academic performance separate from clinical productivity, such as education, research, and quality. Although these activities may be difficult to track and do not have standardized units of measure, they merit inclusion into a compensation plan as part of the mission of an academic center. In addition, this information provides valuable insight into resource allocation such as provider effort. A department may assign weighted values to these activities they deem most important to the mission of the medical school, and provide a bonus or incentive based on this score. Some academic clinical departments have created a standardized measure, derived from the concept of RVU to measure non-clinical effort. For example, one medical school implemented an educational value unit (EVU), which measures educational work completed by faculty physicians such as core education, clinical teaching, and administration of educational programs. The EVU is a time-based system which more equitably aligns teaching effort with funding. The same department has recently developed the financial value unit (FVU) as another mechanism designed to align clinical income with clinical productivity, while decreasing variation in compensation in a transparent and fair manner. Another academic department developed a systematic way for faculty to report teaching, research and academic service activities. Clinical faculty members subsequently received incentive income based on credits earned, which was a distribution of up to 5% of the practice plan. Non-clinical productivity measures are most effective when a department carefully
aligns the incentive with the overall mission of the department, or with annual targets related to performance vital to the department. This insures an award for motivating physician behavior that meets or exceeds expectations such as with timely turnaround of documentation or participation on quality task forces or committees. Establishing a measure for scholarly effort is not a new concept for academics, as grants and publications have always been a consideration in the tenure and promotion process; however the inclusion of non-clinical productivity measures still lags behind the implementation of incentives based on clinical standards.

**History of Academic Compensation Models**

Faculty compensation models have evolved over a period of time, with the majority of the changes occurring in the past fifteen years. Historically, physicians were paid straight salary, with the tenure and promotion process their sole means to advance and increase their base pay. Physician practice plans at academic medical centers emerged in the mid-1960s.\(^{32}\) At that time, there was potential for bonus; however it was typically paid out annually or semiannually at the discretion of the institutional leadership if the department fared well financially. This paradigm started to shift with the enactment of the Balanced Budget Act of Medicare of 1997, which significantly impacted reimbursements to physicians and hospitals for the provision of medical services. Shortly thereafter, several forward-thinking academic medical centers
adopted productivity-based incentive plans to mitigate the effect of declining reimbursement and shrinking profit margins. Several early plans utilized charges, collections and encounters to determine productivity measurements. As more practices became familiar with RVU methodology, which was developed in 1992 with the Resource-based Relative Value Scale (RBRVS), and realized the benefit of benchmarking this data with other practices, that became the most prevalent means by which to measure productivity and thus determine incentive pay. Over the course of time, several academic centers have increased the adoption of productivity-based incentive plans and placed more of the faculty salary at risk. Meanwhile, medical schools have continued to reward achievements in education and research; however in the absence of a standardized means of measurement, reimbursement for these accomplishments varies greatly. More recent advances in technology, specifically web-based applications, have enhanced means of obtaining and reporting data, both clinical and non-clinical. As a result, more academic practices are adopting more objective means to quantify effort and resources spent on certain activities and awarding productivity accordingly. Most recently, quality metrics have been implemented, as revenues are now at risk for meeting certain quality standards, pay for performance is more prevalent, and evidence-based measures are implemented for managing several disease states. The adoption of quality metrics in compensation plans has been aided by the enhancements
in electronic health record information and reporting, as well as government and payer incentive plans related to quality.

Productivity-based compensation was the compensation model for eighteen of nineteen academic centers recently surveyed, and one indicated use of salary with bonus. The majority of these plans (68.42%) had been implemented in the last 5 years, and 84.21% were implemented within the last 10 years. (Appendix B)

**Drivers of Change**

Several factors over the past decade have driven academic practices to explore means for incentive, with the primary being financial pressures. Some of these forces include reduction in National Institutes of Health (NIH) research funding, constraints on federal graduation medical education funds and decreases in reimbursement for professional services as a result of the Balanced Budget Act of 1997. In addition, due to the economic recession, state funding has been reallocated or decreased, impacting medical school funding at the state level. In response, academic practices have shifted more financial risk to the physician in order to motivate them. According to research completed by the Medical Group Management Association, faculty physicians at academic medical centers are increasing hours of clinical practice as medical schools seek increased revenue, due to decreased or flat state funding and federal research money. At the same time their compensation has shown relatively flat increases over
the last ten years. During the period of 1996-2006, annual increases for physicians were approximately 1% to 3%, which does not keep up with inflation.\textsuperscript{34} As a result; retaining and recruiting new physicians seeking equitable pay has proven difficult for several academic centers, as salaries tend to be lower. In addition, medical schools are facing increased competition in the health care marketplace with the growth of larger, integrated health care delivery systems. Finally, academic health centers experience the same increased costs as their non-academic counterparts to deliver health care; including, but not limited to administrative requirements and technology.

\textbf{Applications and results of productivity-based compensation plans}

Most of the academic medical centers that apply productivity-based incentive demonstrate favorable outcomes. After a thorough literature search and review of compensation plans over time, none of the articles recommend straight salary with no consideration for productivity or other incentive for mission-based activity.\textsuperscript{35} Some critics of performance or incentive-based compensation plans claim that programs with a focus on clinical revenue generation will have a negative impact on education and quality of patient care. A review of several articles in the literature found that incentive-based compensation programs can motivate physicians to improve clinical and scholarly productivity without a negative impact on education or job satisfaction. In many cases, the adoption of a financial incentive structure actually enhanced the academic missions.\textsuperscript{36} Likewise, the implementation of a performance-based
compensation has also been shown to increase the growth rate for clinical work, federal funding, improve NIH rankings, and improve faculty satisfaction. Other institutions have realized increases in revenue (both clinical and research), faculty salaries, as well as faculty morale. If adopted effectively, essentially all practices recognize increased clinical productivity. A study comparing baseline productivity and compensation as compared with Medical Group Management Association benchmarks before and after implementation of a productivity-based compensation program utilizing work RVUs resulted in increased productivity for 89% of the faculty physicians with no change in time spent teaching or mentoring students or student evaluations. In addition, some practices have also included alignment of the teaching hospital’s incentives with those of the practice plan. This provides benefit to the academic medical center itself and the patients and communities that it serves through unified management of patient care made possible by vertical integration. This reimbursement philosophy has the potential for opportunities under a bundled payment schedule and “gain sharing”. In addition, these aligned incentives ensure cost and quality goals can be met. A referenced academic health center that utilizes a compensation model based on work RVU and collections, and aligned incentives across the entire health system recognized benefits in recruitment, departmental growth, increased clinical and academic productivity and improved patient care, compliance and safety.
Academic centers that have successfully adopted result-driven compensation plans cite common key factors for success. Faculty buy-in and familiarity of the compensation plan is vital to its adoption and longevity. Several faculty are resistant to the idea of changing to a performance or incentive-based plan because they hold a historic belief that they should receive a guaranteed salary to allow for academic freedom. Therefore, transparency and communication of results; not only clinical, but also those that are related to scholarly activity, should be included in the implementation plan of a compensation model. Periodic evaluation of the compensation plan and flexibility is essential to ensure that the plan continues to be in alignment with departmental goals and mission, as well as account for any changes in the practice. Equitable allocation of resources, aligned with productivity measures is also an important consideration. If a physician is achieving higher productivity results, yet using a disproportionate share of resources, this should be accounted for in overhead allocation. Standardized benchmarking is another important factor to insure productivity is measured objectively. Institutional and departmental leadership must also account for practice size, setting (hospital or clinic-based), payer mix, and billing and compliance regulations. Additionally, academic physicians are often referred the most complex cases due to in-house expertise and teaching opportunity. While this has advantages for the education mission and referral relations with other physicians, there can be negative consequences related to productivity measurement. Complex cases
require substantial time investments absent proportionate reimbursement or relative value units.44 Similarly, budget availability can play a significant role. Department and institutional leadership must identify and continuously monitor the sources of funding for physician compensation and include that in the plan itself. For example, the incentives may be based on the prior year’s performance or residual funds remaining at the end of the year. Finally, the compensation plan must be equitable, straightforward and relatively easy to administer.45

**Future Considerations**

Changes in health care reimbursement methodologies and continued increases in the cost of delivery of health care are imminent; therefore, compensation plans will continue to evolve. External influences, such as governmental changes to address national debt and healthcare financing, and increased accountability and reporting for safety and quality measures will define considerations for financial and compensation plans of the future.46 Over the past ten years, federal funding sources have made steps toward incentivizing value-based measures and away from volume-based reimbursement. These incentive programs often transition into penalties for not abiding by these measures over a period of time. This trend is expected to continue with health care financing reform. Some examples of these value-based programs are: the Physician Quality Reporting System (PQRS) and the American Recovery and Reinvestment Act of 2009 (ARRA), which includes incentives for successful adoption of
electronic health records meeting the Meaningful Use requirements. Other federal programs related to value-based patient care include Accountable Care Organizations (ACOs), bundled payments for comprehensive hospital care, the Value-Based Purchasing Program, and inclusion of the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) and the Consumer Assessment of Healthcare Providers and Systems for Clinician and Group (CG-CAHPS) patient satisfaction surveys. Alignment of the physician practice plan with the health system, contracted payers and the School of Medicine is vital as healthcare policies alter traditional cost structures and advance toward ‘bundled payment methodologies and population-based health outcomes reimbursement strategies.’ The movement of health systems to become more integrated will impact medical schools without structured ownership or legal affiliation with the health system. In addition, the projected physician shortage will have an impact on future recruiting opportunities; therefore, an attractive and viable compensation plan is critical for physician staffing strategy. Legislation impacting funding of graduate medical education, regulation of academic medical centers and training requirements for physicians will also impact how productivity is incentivized and funding for physician services. The associated expenses with increased technology and administrative requirements will also continue to affect compensation models. Ultimately, patient-driven care as it relates to quality measures and transparency will impact incentive programs instituted at academic medical centers. As patients review
their care experiences and seek public information regarding others’ experiences, physicians must account for how this care is delivered, measured, and reimbursed. These transitions in focus of reimbursement and emphasis on cost containment and quality will have a significant impact on how compensation plans align with these initiatives and the physicians’ response.

**Conclusion**

The means by which academic physician faculty is compensated for their efforts has changed over time, typically in response to factors in the external environment. Productivity-based incentive models are the most prevalent type of compensation, as academic centers struggle with many of the same financial issues as non-academic practices. In addition, medical training programs face similar financial issues as they relate to their other scholarly missions and community presence. There is no “one-size-fits-all” solution for academic medical practices. Each compensation model has its strengths and weaknesses, and the best fit for a group will likely depend on the unique attributes of the group itself. However, a few consistent keys for a successful compensation model include: alignment of incentives, flexibility and transparency of the plan, the ability to obtain and measure pertinent data; and group-buy in. Although academic practices lagged behind their non-academic counterparts in instituting productivity-based incentive plans, most have identified methods to meet their clinical productivity goals without a negative impact on fulfilling the other missions, education
and research. Over time, medical schools have adapted their faculty payment plans in response to external financial pressures, which emphasizes the importance placed on identifying the metrics and goals most important to the institution, and rewarding outcomes in alignment with those goals.
Appendix A

Figure 1

Base Compensation as a Percent of Total Compensation


Figure 2

<table>
<thead>
<tr>
<th>Measure</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Charges</td>
<td>21.20%</td>
<td>17.63%</td>
<td>16.10%</td>
<td>11.63%</td>
<td>11.14%</td>
<td>17.73%</td>
<td>10.40%</td>
<td>16.47%</td>
<td>25.09%</td>
</tr>
<tr>
<td>Collections for Professional Charges</td>
<td>36.10%</td>
<td>27.30%</td>
<td>24.88%</td>
<td>20.03%</td>
<td>22.14%</td>
<td>29.26%</td>
<td>20.50%</td>
<td>25.32%</td>
<td>43.64%</td>
</tr>
<tr>
<td>Number of Patient Encounters</td>
<td>11.50%</td>
<td>9.40%</td>
<td>5.85%</td>
<td>5.33%</td>
<td>5.28%</td>
<td>7.75%</td>
<td>5.12%</td>
<td>6.98%</td>
<td>14.71%</td>
</tr>
<tr>
<td>Research Metrics</td>
<td>22.80%</td>
<td>23.40%</td>
<td>15.12%</td>
<td>16.80%</td>
<td>14.81%</td>
<td>18.24%</td>
<td>16.61%</td>
<td>24.29%</td>
<td>41.82%</td>
</tr>
<tr>
<td>Teaching Metrics</td>
<td>20.90%</td>
<td>23.70%</td>
<td>17.07%</td>
<td>12.12%</td>
<td>15.54%</td>
<td>18.24%</td>
<td>16.77%</td>
<td>25.32%</td>
<td>40.36%</td>
</tr>
<tr>
<td>Number of RVUs</td>
<td>34.00%</td>
<td>39.40%</td>
<td>20.98%</td>
<td>34.09%</td>
<td>31.09%</td>
<td>39.93%</td>
<td>30.59%</td>
<td>47.68%</td>
<td>58.39%</td>
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<tr>
<td>Number of Work RVUs</td>
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<td>Number of Total RVUs</td>
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</table>

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Appendix B

Independent survey of anonymous academic practices – 19 respondents

Which of the following best describes your current physician compensation model?

- Salary + productivity-based incentive: 94.74% (18)
- Salary + bonus: 5.26% (1)
- Salary only: 0.00%

If compensation is productivity-based, which measurement is used? (Select all that apply)

- Quality metrics: 21.05% (4)
- Education metrics: 36.84% (7)
- Research metrics: 36.84% (7)
- Total RVUs: 5.26% (1)
- Work RVUs: 68.42% (13)
- Collections: 57.89% (11)
How long has your current physician compensation model been in place?

- 15+ years: 10.53% (2)
- 10-15 years: 5.26% (1)
- 5-10 years: 15.79% (3)
- 3-5 years: 31.58% (6)
- 1-2 years: 31.58% (6)
- <1 year: 5.26% (1)

If you indicated that you use a productivity-based incentive plan, what percentage of the faculty physician's salary is at risk?

- 100%: 5.26% (1)
- 50-99%: 5.26% (1)
- 41-50%: 0.00% (0)
- 31-40%: 5.26% (1)
- 21-30%: 5.26% (1)
- 11-20%: 21.05% (4)
- 1-10%: 26.32% (5)
- 0% - paid as additional compensation: 31.58% (6)
If you indicated that you use a productivity-based incentive plan, has it resulted in overall increased clinical productivity?

- Yes: 73.68% (14)
- No: 5.26% (1)
- Undetermined: 21.05% (4)
Notes


6 Ibid.


8 Ibid.


19 Medical Group Management Association. *MGMA Academic Practice Compensation and Production Survey for Faculty and Management: 2013 Report Based on 2012 Data.* (See Note 11).


24 Reece, “Adopting Industry-Style Business Model to Academia” (see note 20).


29 Marcus, “Aligning Incentives in Orthopaedics” (see note 5).

30 Stites, “Aligning Clinical Compensation with Clinical Productivity.” (See note 21).


36Andraea, “Physician Compensation Programs In Academic Medical Centers.” (See note 33).


38Reece, “Adopting Industry-Style Business Model to Academia” (See note 20).

39Mooradian, “The Business of Academic Medicine” (See note 2).


41Marcus, “Aligning Incentives in Orthopaedics” (See note 5).

42Levin, “Aligning Incentives in Health Care.” (See note 27).

43Andraea, “Physician Compensation Programs In Academic Medical Centers.” (See note 33).


46Stites, “Aligning Clinical Compensation with Clinical Productivity.” (See note 21).

47Levin, “Aligning Incentives in Health Care.” (See note 27).


