

Gauging Emergency Physician Productivity: Are RVUs the Answer?

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The RVU, or relative value unit is rapidly gaining popularity in the measurement of emergency physician (EP) productivity. Common applications include EP profiling and EP compensation, or reimbursement. The growing prevalence of the RVU as a metric for physician productivity raises a number of questions. Why is productivity measurement an issue? Didn't emergency medicine (EM) manage for many years without productivity measurement? Is it fair to base EP compensation on a measure of individual productivity? What is an RVU? Is it a fair and equitable gauge of EP productivity? This article briefly addresses these questions.

Why measure productivity?

Industries outside of healthcare have long recognized the vital importance of productivity measurement on the success of a business enterprise. Simply put, productivity measures the work output per individual worker. In an industry such as manufacturing (e.g. building automobiles), increasing worker productivity results in the capacity to build a fixed number of autos by a smaller workforce or, conversely building more automobiles with a fixed workforce. If individual productivity (output of quality product) directly impacts a worker's compensation, the worker becomes more motivated to produce. Enhanced productivity improves the business enterprise's opportunity to create wealth for its workforce and expands its capacity to create quality product.

Let's apply the concept of individual productivity to EM. Traditionally subjective methods estimate the productivity of a particular EP. The medical director and peers may consider an EP "fast" or "slow" based upon anecdote or personal opinion. The ED nursing director may conclude that the ED "shuts down" or becomes terribly inefficient when two particular EPs work together. A hospital administrator may produce a statistically invalid comparison of CT utilization rates per individual physician or may profile other diagnostic studies in an effort to target a particular EP for global ED inefficiency. Perhaps an EP receives leniency for inefficiency consequent to his personality or clinical competence. This subjectivity supports the establishment of a more equitable means of assessing EP "work output".

Others in healthcare more quickly recognized the impact of productivity measures on work output. Our colleagues in the surgical specialties acknowledge the increased revenue created by efficiency in the operating room (OR). Anesthesiologists likewise increase productivity through supervision of nurse anesthetists and involvement in the OR turnover of patients. The managed care industry and hospital ownership of primary care practices drives home the relevance of efficiency in office-based practice. Our hospital administrators, including those managing ED operations frequently apply "worker" (e.g. nursing staff and others) productivity measures to management and compensation arrangements.

EP Productivity and Compensation Arrangements: Is It A Fair Application?

This central question requires a challenge to the historical systems of reimbursing two EPs working together in the ED. For purposes of this example, we assume that both physicians are identically qualified based upon the hospital and medical staff credentials process. Documentation and coding are compliant with all federal and state regulations. Physician A is highly energetic and motivated. He manages to speedily initiate care and manage multiple patients while maintaining a running dialogue with patients, families, and ED staff. Physician A consistently delivers high-quality care. On average, he manages 2.4 patients/per hour and generates 6 RVUs/hour. (An explanation of the RVU formula occurs later in this article).

Physician B is plodding by nature. He evaluates a presumably septic elderly patient, orders labs, but adds cultures and antibiotic orders later after return of the white blood cell count. He fails to initiate care on waiting patients prior to embarking on a protracted laceration repair on a stable patient. Physician B manages an average 1.5 patients/hour and generates 3 RVUs/hour. The number of patients leaving the ED prior to medical screening increases during his shift, which increases risk to the patients, physician, and hospital. The patients that physician B manages receive highly competent and conscientious care.

Traditionally EPs A and B receive identical compensation for clinical duties based upon number of hours worked. One physician may receive greater compensation relative to seniority or status within the group. Profit sharing arrangements may ignore the discrepancies in productivity of these two physicians. It seems a fair proposition that physician A, by virtue of his superior productivity and revenue generation for the group deserves compensation aligned with this superiority. Therein lies

the central argument for a physician productivity metric or system that equitably rewards individual physician productivity.

The RVU: What Is It and Where Did It Come From?

CPT, the Current Procedure Terminology book, codifies approximately over 8,000 procedures and undergoes annual modification by the CPT Editorial Panel. Prior to 1992 Medicare reimbursed physicians for their CPT described services based upon charges. In 1992 the federal government—in an attempt to standardize physician payments—established the Resource Based Relative Value Scale (RBRVS). The RBRVS assigns a value to every CPT code. The assigned value for each CPT code is referred to as the relative value unit (RVU) for that code. The Medicare Fee Schedule for each CPT code is based upon RVUs. The medically necessary work performed and documented in the course of patient care determines CPT code selection.

This much abbreviated description of CPT and the RVU may create the impression that the CMS Relative Value System (RVS) is entirely a creation of CMS and our federal government. Albeit a highly beauracatic system, the RVS maintains significant physician involvement. The American Medical Association (AMA) originally created CPT, and the AMA/Specialty RVS Update Committee (RUC) provides ongoing recommendations for annual updates to physician RVUs. The sixteen-seat CPT Editorial Panel maintains CPT. The AMA nominates twelve of these seats. Active involvement by ACEP physician reimbursement experts is pivotal to the pursuit of fair reimbursement for emergency physicians. Dr. Ken DeHart is a longstanding leader with the CPT Editorial Panel and serves as CPT Advisory Committee Representative. Drs. Michael Bishop, Dennis Beck, and James Perri provide expert EM representation on the RUC as EM RUC Representative, EM RUC Advisor, and EM RUC Alternate, respectively. Two ACEP committees, the Coding, and Nomenclature Advisory Committee (CNAC) and the Reimbursement Committee, devote significant time and energy to issues of EM reimbursement and its impact on patient care and EP compensation. Numerous ACEP staff provide expert direction for our membership relative to reimbursement issues. These committees significantly impact the reimbursement climate for emergency medicine. David McKenzie, Director of the ACEP Reimbursement Department and Mary Ellen Fletcher, a Certified Professional Coder and the Reimbursement Department Administrative Assistant are invaluable to ACEP's reimbursement and fair compensation efforts. ACEP Associate Executive Director Gordon Wheeler, ACEP Federal Affairs Director Barbara Tomar, and ACEP Congressional Affairs Director Brad Gruehn provide expertise and leadership that is unmatched in the industry on the pivotal political front. EPs owe much to these and other dedicated and talented ACEP staff.

Now that we have established that CMS assigns an RVU for each CPT code, let's turn our attention to calculation of the RVU itself. Bear in mind that RVU values undergo annual updates and each iteration of the RVU formula has direct and often substantive implications for physician reimbursement. Three components comprise the initial RVU calculation for each CPT code:

1. Work - the estimated value of the time, effort, expertise, and intensity of the service. The work component contributes approximately 55% of the RVU value.
2. Practice expense—the estimated value of overhead and other expenses necessary to run the practice. Practice expense contributes approximately 42% of the RVU value.
3. Professional Liability Insurance (PLI)—the estimated value of malpractice cost for the service. This component contributes approximately 3% of RVU value.

A Harvard study initially determined the work component of the RVU. The intent of the work component is to represent the "average" work done by a physician of "average" efficiency in performing a particular service. The work component is comprised of estimates for five sub-components:

Time - the time required to perform the service

Mental effort and judgment - the extent of mental effort and judgment required to perform the service

Technical skill - the technical skill required to perform the service

Physical effort - the physical effort required to perform the service

Stress - the stress involved in delivering the care

The second component of the RVU is practice expense. This is the estimated "value" of overhead and other expenses necessary to run the practice. EM, as a hospital-based specialty without patient care "offices" faces a substantial disadvantage here. Despite longstanding, vigorous efforts by ACEP, CMS fails to formally recognize as a legitimate practice expense the service of EPs to the approximately 44 million uninsured of our country. This further compounds EM's

disadvantage relative to the practice expense component.

The third and last RVU component is PLI, estimated as the “value” of malpractice insurance cost for the service. EM is a high-frequency, high-severity specialty relative to malpractice risk, and I do not need to describe the recent acceleration of professional liability insurance costs to this audience. Unfortunately, since the PLI component contributes only 3-4% to the composite RVU, EP compensation benefits very little from the current malpractice crisis.

Each of these three components is then adjusted by the geographic practice cost index (GPCI), which attempts to correct variances in the cost of living for different regions of the country. The total RVU is then multiplied by an annually determined Conversion Factor to come up with a dollar amount for the payment schedule.

As you can see, the RVU formula is a bit complicated. The summary above is condensed and does not address categorization of CPT codes and other important nuances of CPT and the RVU. Non-governmental third party payers traditionally base proposed fee schedules on CMS values for services. The bottom line—EP reimbursement is derived directly from RVU generation. With this principle established, this paper concludes with a discussion of the fairness and equity of directly linking EP reimbursement to RVU generation

Is It Fair to Apply RVU Generation to EP Compensation?

RVU generation creates the revenue for the EP practice. Some EP groups therefore decide to compensate each individual group member based upon the RVUs generated by that individual physician. This method, as with any method of determining EP compensation requires the group to provide for overhead expense, regulatory and legal expense, cost of capital or debt, professional liability insurance, recruiting expenses, and any other expense of practice management or group capital expenditure. Arguments in favor of RVU application for EP compensation include: objectivity; removal of distinctions between payer types; and, penalization of inefficiency with monetary reward for efficient patient care. Arguments against this application of RVUs include: intra-group competition for complex cases or those with procedures; creation of RVUs by “slow” physicians through liberal diagnostic test utilization, which drives up the level of service designation and the work component of the RVU; and, lack of clarity relative to the impact of non-physician ED providers (nurse practitioners and physician assistants).

There are two basic models for the distribution of profit after expense through the application of RVUs. One model compensates the EP solely based upon individual EP generation of RVUs with no hourly “guarantee”. Because ED cases of high complexity generate higher RVUs (assuming accurate documentation), this model may create intra-group competition for these complex cases, particularly when the work-up is potentially expeditious. Examples of such patient cases include the acute myocardial infarction and the septic geriatric patient. Cases with procedures also tend to generate higher RVUs. Despite these potential downsides, some EP groups that engage in this method of EP compensation are content with its positive impact on group productivity and dynamics.

A second and more common method of RVU application involves the establishment of an hourly guarantee with profits after group expenses (inclusive of the hourly guarantee expense) distributed based upon individual EP RVU generation. This method provides some EP security through the hourly guarantee while seeking to positively influence EP productivity through RVU-based profit sharing. The ratio of income attributable to the guarantee and profit share varies widely. One potential weakness of this model of RVU application is the dilution of the EP’s individual accountability for productivity and efficiency.

Let us now address several issues specific to RVUs in compensation arrangements.

- A. Inefficient EPs maintain average or above-average RVU/hour figures through the liberal use of diagnostic testing. One method to offset this inherent weakness of the RVU system is to measure patient/hour parallel with RVU/hour data. If a particular EP consistently is one or two standard deviations below the group mean on patient/hour data, the EP group may choose to set a benchmark patient/hour ratio necessary to share fully in the RVU profit distribution.
- B. Physicians who volunteer to work a propensity of night shifts are a benefit to the group but may be penalized on RVU production as a result. This may occur due to the traditionally lower patient volumes during the overnight shift period. Use of an altered conversion factor (the figure used to translate RVU production into a dollar figure based upon profit after expense) overcomes this weakness. The EP group can elect to use a higher conversion factor or an hourly pay rate offset for the committed overnight physician(s) in order to offset any discrepancy in profit distribution.
- C. Use of non-physician providers (NPPs) such as nurse practitioners and physician assistants alters the system importantly. For example, an inefficient EP may focus on supervision of a relatively large number of NPP cases, thus

generating a significant number of RVUs. This potential issue may be overcome through attention to NPP scope of practice and parallel tracking of individual EP oversight of NPP cases. Exclusion of NPP-initiated or managed cases is an option. However, the inherent responsibilities and medico-legal risk of NPP oversight argues in favor of including NPP cases in the RVU profit share calculation for the EPs.

- D. Exclusive use of RVU generation systems to distribute profit after expense fails to reward other EP behavior that is beneficial to the group. Examples of such behavior include regular participation in EP group and/or medical staff meetings, active involvement on hospital medical staff committees, and positive patient and staff interaction that presumably impact patient satisfaction scores and reduce patient complaints. Administrative, managerial, and quality assurance (performance improvement) duties tend to be compensated as part of group overhead or expenses and are not the topic of this discussion.

In order to reward certain activities that are beneficial (if not pivotal) to the success of the group as a whole, the group may consider allocating a percentage of profit after expense distribution based specifically on these activities. For example, a group may encourage EP group and/or medical staff committee participation by allocating 80-90% of profit after expense based upon RVU generation with the remaining 10-20% designated for distribution based upon other beneficial activities. Likewise, the group may reward group members with superior satisfaction scores on physician-specific satisfaction score queries. If an EP fails to qualify for this percentage of compensation, the remaining, qualifying group members divide this additional profit.

Proper and accurate documentation are requisite to RVU generation. In order to prevent “lost dollars”, EP groups must closely monitor documentation to confirm conformity with applicable standards and regulations. EP groups may choose to directly link RVU profit share with individual EP compliance with documentation standards. Physician groups who perform their own coding may wish to transfer the duty of coding to a Certified Professional Coder in order to remove the potential coding bias generated by an RVU-based compensation system.

Groups may distribute RVU-generated compensation monthly, quarterly, bi-annually, or annually. Distribution periods of 3-6 months or longer tend to level month-to-month cash flow variations for the EP group.

Conclusion:

The application of RVU generation to EP compensation is growing in prevalence. While not a perfect tool for equitable EP compensation, the RVU is superior to traditional profit after expense distribution. Certain weaknesses in RVU compensation methods may be overcome by tracking other EP metrics (e.g., patients/hour, NPP oversight, night shift work) with alteration of the RVU conversion factor accordingly. Overall, the application of an RVU-based compensation system likely produces a positive influence on EP efficiency and productivity. This assertion is not proved through evidenced-based medicine to date. Ultimately, the enhancement of EP efficiency and productivity positively impacts patient care through reductions in delays to diagnosis, delays in management, and patient departures prior to completion of care.

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About COREmatica:

COREmatica is the leading developer of compensation management software specializing in performance-based payroll for health care providers. Headquartered in Ann Arbor, Michigan, COREmatica works with hospitals and large health care provider groups to implement effective incentive-based compensation plans to drive productivity and keep costs aligned with revenue objectives. Our software product, COREmatica®, is used nationwide to calculate pay for thousands of clinicians in more than 25 states.

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