

Physician Productivity

Issues and Controversies

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In the not-too-distant past, most physicians were paid by one of two ways: a fixed salary or by collecting fee-for-service charges. The former payment system was typical for physicians employed at academic health centers, larger integrated health care systems, commercial laboratories, and public hospitals, and for many hospital-based physicians. The latter payment system was typical of private practice groups, independent laboratories, and some hospital-based physicians. As the structure of health care reimbursement changed from 1980 to 2000, many physicians began changing to systems characterized by a guaranteed base salary with one or more variable salary components such as incentive, supplement, or bonus payments. Because the variable salary components were often used as incentives to modify physician behavior (eg, utilization of health care resources) or to increase productivity, there arose a need for the development and implementation of systems to track and analyze behaviors and productivity.

Because of the structure of reimbursement systems at that time, this approach was primarily aligned with billable charges. The most widely used of these productivity measurements was the relative value unit (RVU) system, which attempted to assign units of productivity based on “relative values” of specific activities. Early on, this system made intuitive sense: most reimbursement during that era was based on fee-for-service systems, so increased productivity was directly related to increased charges and payments. Not surprisingly, important flaws in these systems quickly became evident: the incentive was to do as many procedures and perform as many tests as possible to maximize reimbursement, increasing utilization was a constant risk (even for unnecessary procedures and tests),

and development of standardized approaches to account for nonbillable activities lagged behind. Moreover, because there was no incentive for physicians to do things that did not generate charges, not surprisingly these activities received less emphasis.

As time passed, a number of changes in health care delivery occurred, all of which have the net outcome of driving utilization of tests and services downward. These included the emergence of managed care programs, growing awareness that keeping populations healthy through preventive measures resulted in decreased costs, adoption of best models of health care delivery around the world, and the growing use of evidence-based medicine. Through time, as these factors have matured and become widely adopted throughout health care, it has become apparent that the traditional approach of assessing productivity linked to billable services is fundamentally at variance with the concept of decreased utilization as part of contemporary health care.

For pathology, as in many other medical specialties, the recent past has been characterized by important changes in practice. In many academic medical centers, large private practices, and reference laboratories, services increasingly are aligned with the need for subspecialization. While necessary to provide care in these settings, it results in fragmentation of workload into smaller subsets. As a result, many pathologists no longer practice outside their areas of expertise or practice general pathology. The effect is not surprising: while pathologists are needed for each particular subspecialty, specimen volumes may be low in some categories. Thus, there may be an imbalance in the measured workload and productivity that occurs as a result of subspecialization of service delivery.

There are other gaps in simple RVU-based systems: some physicians (eg, anesthesiologists, obstetricians) need to be paid while covering an in-house call whether or not they perform any billable activities, some physicians work in settings where patient volumes (and measurements of productivity) are inherently low but physician services are needed, and productivity in outpatient and inpatient settings has been recognized as not being the same thing.

Another important issue is that not everything physicians do as part of patient care can be measured easily or directly: coordination of care, sitting on or chairing essential committees, education, training, research, serving on medical staff panels, and advocacy all are important for patient care. It is true that many organizations adjust productivity targets for these types of activities, but the multiplicity of activities, number and diversity of health care systems, different adjustment methods, and other factors make development of a rational and equitable system at best challenging and at worst impossible. There are no widely accepted standards for making these adjustments.

Developing widely applicable benchmarks is problematic. Practices vary in the time and effort devoted to professional activities, and it is difficult to compare relative productivity among private practices, teaching hospitals, government health care systems, and reference laboratories. Even within these groups, there are important differences: in large private practices, pathologists may not perform gross examinations of most specimens, whereas in smaller practices, pathologists perform both gross and microscopic examinations. In many teaching hospitals, residents and/or fellows perform most or all of the gross room duties, but not all teaching hospitals have fellows in every specialty, and their roles vary substantially between programs. Some hospitals continue to perform a large number of autopsies, which do have RVU values assigned to them, whereas many practices no longer provide autopsy services. Cytopathology services are similar in that the provision of these services varies widely between practices and health care settings. Benchmarks established for clinical pathology services are derived from even more variable sources, since only a handful of clinical pathology activities have billing codes and RVU assigned to them. Although some large academic and referral hospitals generate substantial billable clinical pathology services, most hospitals do not have this much test volume. As a result, surrogate models have been designed to measure productivity. One approach has been to assign arbitrary RVU values for each clinical laboratory test performed in a section of the laboratory, thereby generating arbitrary RVU values. Three flaws to this approach are evident: higher utilization means “higher productivity”; the pathologist did not order, perform, or report the results of any of these tests; and there is no standard approach for

equitably allocating RVU in settings where more than one pathologist or laboratory scientist oversees different parts of the laboratory.

A final issue regarding productivity and use of benchmarks occurs at the system level. Health care systems, hospitals, clinics, and departments have varying degrees of operational and administrative efficiency. Not unexpectedly, productivity goals should be easier to meet in more efficient environments. Resources such as capacity for robust data collection and analysis also vary widely between organizations. Last, organizations vary in their track record: some have had detailed productivity analysis for decades; others have much less experience. Attempts to compare productivity between these systems have obvious flaws and limitations.

Alternatives

One obvious question is whether there are alternatives to the RVU system. The raw number of surgical or cytopathology (or other) accessions clearly is inadequate due to the wide variation in complexity of specimen types, the number of “parts” received with each accession, and the use of ancillary studies such as special stains, immunoperoxidase stains, in situ hybridization assays, and other studies. In the same way, the number of tissue blocks or slides is not an accurate measure of productivity. Time spent on cases cannot be tracked in a realistic and reproducible manner. Despite these challenges, alternative systems have been developed in other countries.

One system that has been described in some detail is the use of Kim Units (KUs), which are derived from specimen numbers and types that are weighted to calculate overall KU activity in a department.¹ Currently, for the National Health System in the United Kingdom, workload is tracked differently: specific activities are tied to a predetermined timetable system in which small ranges of time are allocated for each activity.^{2,3} By use of a spreadsheet, professional activities can be tracked and the total amount of time spent on professional activities calculated. Data collected from this system are used for several reasons, including decisions regarding staffing levels.^{2,3} In Canada, a system called L4E (level 4 equivalent) has been described.⁴ In this system, there are six activity levels, with level 4 representing “small specimens for diagnosis, including all endoscopic biopsy specimens and small organs removed for benign conditions.”⁴ These specimens are weighted as having a 1.0 value; levels 1 to 3 are weighted lower and levels 5 and 6 are weighted higher. There are no controlled comparisons of the different systems and no analysis of whether one is better or worse than another. At this point, we simply do not know which, if any, is the best approach.

Suggestions for the Future

New Definitions and Understanding of Productivity

Productivity assessments based on RVU derived solely from billable activities need to be abandoned or modified substantially. In an era characterized by prevention-focused medicine in outpatient settings, decreasing reimbursement for procedures and tests, and introduction of new diagnostic technologies, contemporary definitions of productivity need to be developed, tested, and implemented. Out of this should come new models for assessing and tracking measurements of physician productivity.

Alignment With Health Care Outcomes

Increasing focus on quality and safety in health care and an emphasis on outcomes need to be aligned with productivity models. In the long run, it may be possible to develop ways to measure and track the health of populations served by a group of providers; this eventually should allow us to track activities (productivity) that result in long-term benefits to the health of populations. Current productivity models are not even acceptable surrogates for effects on population health outcomes.

Nonbillable Professional Activities

More effort is needed to allocate credit for nonbillable professional activities. These include activities important for patient care, organizational operations, professional competence, maintaining certification, job satisfaction, and physician engagement. Examples include performing second opinions on difficult cases,⁵⁻⁷ participating in consensus conferences and in tumor board and other clinical conferences, discussing cases with clinicians, serving on hospital or clinic committees, and participating in organized medical staff activities.

Education and Training

For physicians who work in teaching hospitals, time and effort devoted to teaching students and training residents need to be part of productivity models. The presence of students and residents affects productivity; what we do not account for is how much time and effort is required or how it varies between residents at different levels of training. A better understanding of the most effective ways to teach students and train residents would have the additional benefit of increasing our ability to understand the time and effort needed for these tasks.

Existing Models

Some health care systems and practices have developed effective productivity and compensation models that work

for those organizations. These models are mature and robust but still have their heritage from an era of health care delivery and technology that we are now leaving. In addition, those models were developed for specific circumstances and may not be applicable to other settings or be scalable at regional and national levels. Because of their experience with developing productivity models, however, these organizations should play a lead role in developing contemporary models.

Adaptability

Models must be adaptable to changes in medical practice. For example, the informational content of surgical pathology reports has grown substantially in the past 20 years, which means that the amount of time necessary to complete each case evaluation and diagnosis also has increased.^{8,9} Although there have been adjustments to RVU systems to account for this, much more needs to be done to account for increased use of biomarkers and the need to integrate such information into diagnostic reports. Medical practice is not static: measurements of productivity should not be static.

Flexibility

Medical practice varies by geography, patient populations, scope of services provided, degree of integration between inpatient and outpatient services, and many other factors. Productivity systems need to be sufficiently flexible to be used in a wide variety of systems, yet still allow for comparisons between systems so that benchmarks can be established.

Simplicity

Models should not require so much data collection and analysis so as to create skepticism.

Transparency

Models should be open as to definitions, processes, and data handling. In particular, adjustments made for productivity (eg, to account for “nonproductive” activities) should be defined and standardized so that comparisons between practice settings are meaningful.

Developing contemporary productivity models with flexibility for future changes in health care should be a high priority for all of us. Productivity measurements are useful administrative tools to guide staffing, track individual and group productivity so as to allow for changes in allocation of duties, and help guide assessments of efficiency within practices and health care systems. But they need to be aligned with contemporary health care delivery and current medical practice, as well as be focused on outcomes.

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