Empowering Health Care Providers

A Collaborative Approach to Enhance Financial Performance and Productivity in Clinical Practice

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Abstract

Background
The combination of inadequate financial training, limited benchmarks, and mindset contribute to many physicians prioritizing revenue below quality, outcomes, and safety. This creates a challenge as hospital administrators aim to motivate clinicians to improve RVU generation and increase revenue.

Recent Findings
Creating physician/administrator teams that defines and explores the gap between observed and expected financial performance in parallel with appreciating the physician's practice preferences can create new opportunities for billing. The proposed 3 phase approach emphasizes nonjudgmental communication, education and partnership. The most common and effective opportunities for improvement include billing optimization, scheduling and system infrastructure modifications.

Implications for Practice
As reimbursement decrease, balancing revenue generation with physician satisfaction has become paramount. Promoting data drive bidirectional communication can lead to identifying previously unrecognized billing opportunities where change is driven by providers rather than by 1-dimensional institutional goals.

Introduction

Today's clinicians aspire to give value-added care, yet one of the most relevant metrics of value, the dollar cost of care, is not taught to providers in any depth.[1-3] The American Medical Association's efforts to reimagine residency education has uncovered gaps in addressing value in health care.[4] Recognized barriers include physician attitudes, prioritizing care quality over financial matters,[5,6] and inadequate training with a recent scoping survey[7] stating most medical practitioners appear to gain billing knowledge through "an osmotic process." The learning gap translates into inaccurate billing practices.[8]

Creating changes in provider habits is a multilayered process. Although most department chairs use some measure of productivity for salary compensation,[9] merely setting work targets does not increase productivity[10] and has led to reduced physician satisfaction.[1] Addressing wellness has become a key factor[6,11] because nonrevenue generating activities like indirect patient care, scholarly pursuits, and administrative roles compete with revenue-generating clinic time. Many

physicians hand off billing to their coders,[12,13] which may save time; a feedback loop that involves providers leads to better billing[9,14] with one practice discovering that physician/coder teams were more effective than coders alone.[15]

We recognized many of these shortfalls in our own practice and proposed that addressing them could engage our provider and improve productivity. We aimed to develop a valid and reliable RVU measurement tool that our provider-administrator teams could use to model scheduling and billing changes before to implementation. After modifications were made, observed productivity was compared with the expected results, and further iterations were pursued. We share the successes, failures, and insights from our effort to elevate our team's financial knowledge and use this knowledge to drive improvements.

Methods

We first piloted a provider-administration partnership and a shared understanding of the variables affecting RVU productivity. Informal small group meetings were held to define coding (E&M and procedure codes), scheduling (restrictions, provider FTE, vacation/CME, no-shows/close-in cancellations), and templates (patient volumes, visit types, restrictions, locations, and inpatient service coverage) metrics. Mock templates for pure clinicians, clinicians with EEG/epilepsy expertise, and clinicians with EMG/neuromuscular expertise were modeled in an Excel file (Figure), and estimated RVU values were assigned to each appointment. A provider's weekly, 4 weeks, and yearly projected productivity was calculated, accounting for the impact of time off, unused slots and template variations including inpatient time and night call.

Each provider, the vice chair (S.F.), and an administrative partner met together to validate the model. The group emphasized learning and sharing, with each meeting beginning with the provider giving their practice preferences and providing feedback on the accuracy of their model. If the team felt the data or model was inaccurate, an investigation was pursued and clarified. This information was documented and reviewed at future meetings.

The provider/vice chair/administrative partner team met every 3–6 months for 30 minutes to compare their projected wRVU and observed wRVU. The group also reviewed a chart showing billing metrics including number and type of patients seen and procedures performed, how they were billed, and the associated wRVU to help understand how coding, templates, and schedules translated into total wRVUs. As before, the conversation began with providers giving their impressions, desires for change in practice, and concerns. The team focused on understanding the cause of the difference in projected and observed productivity. Administrators presented potential solutions, providers offered their ideas, and the wRVU impact was determined using the Excel model. Providers alone decided which changes, if any, were made. While our department had in the past identified a wRVU benchmark of 60%, the benchmarks were not referenced, and conversations surrounded on defining and selecting what the provider felt were best next steps.

Concurrent with this process our department meetings intermittently included presentations by our coding team and

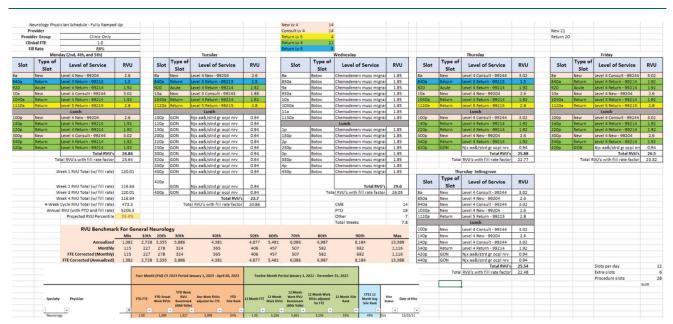**Figure** Provider Template Model Including Schedule, Projected RVU for 1 Week, 4 Weeks, and 1 Year of Work (Left Side, Middle in Green) Including Accounting for an 88% Fill Rate and Clinician Time Away

Neurology benchmarks are included and provider's yearly averages are presented at the bottom. Using Excel, the effect of changing individual data points on weekly and yearly productivity could immediately be visualized.

knowledgeable providers on the shifting national billing and coding guidelines and departmental and institutional financial metrics.

Results

To understand our opportunities in templates, scheduling, and coding, we compared baseline wRVU data from January 2020-December 2020 to postimplementation data from January 2021 to December 2021 (Table 1). Our most important and entirely unexpected finding was that 76% of our provider's baseline templates were not structured to reach the wRVU target of 60% even with billing optimization. Template inadequacies in 5 providers came from heavy inpatient obligations where wRVUs averaged 10 less per day than in the clinic. For our epileptologists, the combination of variably low volumes due to nocturnal work and intermittent closing of our epilepsy monitoring unit (due to COVID bed needs) meant they could not reach the 60th percentile either. Furthermore, the epileptologist's schedules had not been modified to account for the 35% reduction in EEG reimbursement. The 2 higher-performing epileptologists (Table 1, line 23 and 25) had previously compensated for their low productivity by reading additional EEGs and performing interoperative monitoring outside their workday.

Three scheduling opportunities were found. First, some provider's clinical FTEs did not align with their schedules. Second, some providers had scheduling restrictions that led to slots going unfilled unnecessarily. Last, our epilepsy and behavioral neurology teams had a nearly 20% no-show or cancellation rate compared with the department's 12% average. No issues were identified with the provider's time away.

Table 1 Physician Productivity Preimplementation and Postimplementation for Pure Clinicians, Clinicians With EMG/Neuromuscular Expertise, and Clinicians With EEG/Epilepsy Expertise

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Clinic Only	2020-21 FTE	FTE adjusted wRVU	Percentile	2021-22 FTE	FTE Adjusted wRVU	Percentile	% Change
1	0.81	3,660	15%	1.00	5,274	39%	24
2	0.79	4,001	25%	0.78	3,999	25%	0
3	0.78	5,028	49%	0.76	5,709	62%	13
4	0.80	4,738	42%	0.80	4,717	40%	-2
5	1.00	5,391	56%	1.00	5,877	64%	8
6	1.00	4,903	48%	1.00	5,171	53%	5
7	0.58	3,558	19%	0.58	4,292	32%	13
8	0.76	4,534	41%	0.71	5,231	54%	13
9	0.95	4,297	23%	0.95	5,033	38%	16
10	0.77	4,001	28%	0.70	3,879	27%	-1
11	0.87	4,164	28%	0.76	3,868	26%	-2
12	0.83	5,211	55%	0.76	5,788	61%	6
13	0.90	6,593	49%	0.90	7,013	60%	11
Average			**37%**			**45%**	**8**

Clinic & EMG	2020-21 FTE	FTE adjusted RVU	Percentile	2021-22 FTE	FTE Adjusted RVU	Percentile	
14	0.58	5,936	68%	0.56	6,164	65%	-3
15	0.63	6,650	76%	0.61	6,704	72%	-4
16	0.40	7,774	83%	0.40	8,640	85%	2
17	0.97	4,970	47%	0.92	5,139	49%	2
18	1.00	5,188	54%	1.00	5,073	50%	-4
19	1.00	5,870	67%	1.00	6,606	72%	5
20	0.90	4,610	41%	0.90	5,504	56%	15
21	1.00	4,513	38%	1.00	4,840	46%	8
22	0.66	5,166	54%	0.65	4,854	52%	-2
Average			**59%**			**61%**	**2**

Clinic & EEG	2020-21 FTE	FTE adjusted RVU	Percentile	2021-22 FTE	FTE Adjusted RVU	Percentile	
23	0.80	6,743	61%	0.80	6,582	58%	
24	1.00	4,280	16%	0.98	4,356	18%	2
25	1.00	6,352	58%	1.00	5,993	53%	-5
26	1.00	4,133	13%	0.98	4,204	14%	1
Average			**37%**			**36**	**-1**

Highlighted providers increased productivity by 6% or more. Our neurophthalmologist (line 13) had a higher wRVU target.

Most providers had opportunities to improve coding. The most frequent source lied in billing by visit duration when medical complexity could have generated a higher code. Some providers billed the lower wRVU code of "new patient" when visits qualified as higher wRVU "consult." We also identified providers with a considerable number of low RVU telephonic visits scheduled in 40-minute slots. In considering providers who did have higher productivity, 4 of the 5 were EMG/neuromuscular specialists where the wRVU for EMG are higher than other services.

We found departmental process opportunities as well. In 2 cases, clinic space limited the number of patients a provider could see per day. In one instance a provider's medical system classification was incorrect (internal medicine rather than gerontologist), leading to new patients being down-coded by our billing team to lower-level returns.

Our goal was to demonstrate sustained improvement in wRVU production. We proposed that a yearly 5% increase in wRVU (average increase of 3 new patients billed as an N4 per week) would indicate sustained improvement. Excluding the hampered epileptologist and inpatient-heavy physicians, 12 of the remaining 18 providers changed their billing habits and modified their templates leading to an average 12% improvement in

wRVU (range 5%–24%). Changes were implemented at the template, scheduling, coding, and departmental levels (Table 2). Template changes included developing shared clinics with advanced practitioners, increasing new patient slots, removing blocked "saved" slots, reducing scheduling restrictions, and nearly eliminating telephonic visits. Two clinicians moved to a new office allowing for higher patient volumes. One provider was correctly reclassified from primary care to gerontologist. Finally, our behavioral neurology team implemented preappointment calling, a process which reduced their no-show rate and allow patients to convert appointments to telemedicine if needed. Expectedly, providers who chose not to modify their practice had stable wRVUs.

Discussion

Our provider-administrator team used an objective, predictive model for wRVU productivity to create a productivity improvement that outweighed the small time investment to enhance their financial skillset. Previously, our process consisted of a year review of lower-resolution billing data with the option for an educational meeting with a coder. Reviewing our projected and observed productivity data through a combined clinician and administrator lens led to a more meaningful understanding of individual

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Table 2 Summary of Opportunities, Solutions, and Insights Gained From a Team-Driven Assessment of How Templates, Scheduling, Coding, and Departmental Factors Affect Productivity

Opportunity Class	Opportunity	Solution	Insights
Templates	Low wRVU of hospital service	Adding outpatients on during inpatient weeks	Visualizing the gap data led to team developing a solution
	Low patient volumes on template	Shared clinics with advanced practitioners	Physician-AP teams increased volume, allowed AP education
	Nocturnal epilepsy work	Data demonstrated accepting lower wRVU outweight cost of using an outside vendor	Consider quantifying the system value when wRVU are predictably low
	Closed epilepsy monitoring unit (during COVID)	System recognizes choice to close EMU. Efforts made to open as available	Consider quantifying the system value when wRVU are predictably low
Scheduling	Clinical FTE does not align with schedules	Align clinical FTE and patients scheduled	Need for shared oversight of clinician's time
	Restrictions left slots unused	Removal of slot type holds and expand the type of patient that can fill close in cancellation slots	Shared oversight helped determine best patient fit, provider agrees to see any patient in unused slot
	High no-show rate	Initiate precall, offer telemedicine to patients with travel issues	Proactively solve expected failures to reduce predictable loss
Coding	Coding for time rather than complexity	Teach complexity billing, use EHR billing tool and smart notes	Visualizing gap data + education incented behavioral change
	Billing "new" instead of "consult"	Teach providers how to bill a consult	Visualizing gap data + education incented behavioral change
	40-min slots for telephone consultation	Removal or limitation of telephone follow up	Need for shared oversight in provider's patient load
Departmental	Limited clinic space	Switch provider location, initiate telemedicine for remote patients	Need for shared oversight of provider's clinic flow
	Wrong provider classification	Provider reclassification	Need for shared oversight of provider's coding

provider's and our department's practice. We noted that many providers sought additional billing education, asked more profound questions on their clinic structure, and took control of the decision-making process when presented with options.

The insights gained (Table 2) demonstrate the value of a heterogeneous team applying relevant, longitudinal productivity data in an iterative improvement process. For example, in response to seeing the wRVU loss in inpatient service, our hospitalists added an urgent resident supervision clinic to their hospital rotation. Similarly, administrators creatively approached no-shows by initiating preappointment calls and offering telehealth visits to patients with travel barriers. Defining the value of our thinly stretched epilepsy team allowed us to accept their lower wRVU, justifying not hiring an outside vendor and supporting our decision to hire new providers.

The complex nature of assessing productivity and physician motivation drove us to use a change management approach that (1) identified the drivers behind wRVU, (2) teamed stakeholders to develop measurable solutions, (3) piloted solutions with iterative improvement, and (4) delivered data and feedback to the teams to direct change. This process validated our provider's impression that they were busy working full schedules as most of their baseline wRVUs were within 10% of the model's projected wRVU. Identifying that 75% of our practices could not reach the department's wRVU goal of 60% led to an appreciation of how a collaborative approach with bidirectional empathy and shared problem-solving would be imperative. It was rewarding to see our providers make decisions after a nonjudgmental presentation of data with a focus on improvement, not on hitting a goal. For example, seeing how billing an E3 or N3 undervalued their work led many providers to learn and apply medical complexity billing which has made easier by using smart phrases in their clinic notes and documenting medical complexity in an electronic health record billing tool.

One limitation of our study was that we did not continually track the discrepancy between a provider's projected and observed productivity, but rather used the data as a guide; unfortunately, it could not be recreated through our analytics. Thus, we cannot identify which specific practice improvements or change management steps affected in our efforts to enhance billing and patient volumes. Others have used a similar process by employing standardized inpatient notes,[16] education and coding software,[17] workflow changes,[18] and electronic health record innovative tools.[19] We feel that at a minimum, allowing providers the choice to make changes based on longitudinal easy to understand, and personalized data allows them to develop their own motivation and engage in shared problem solving.

TAKE-HOME POINTS

→ While physicians aim to provide value-added care, they often need more financial training and a mindset to prioritize revenue generation.

→ Creating valid and detailed mock templates that include wRVU data can give physicians a clear view of the differences between their expected and observed productivity.

→ A feedback system that combines a nonjudgmental problem-solving environment with relevant, detailed productivity data can foster physician buying in and lead to novel revenue-generating ideas.

→ Providers that changed their practice had significant improvement in their wRVU generation.

→ The most common and practical opportunities for improvement include billing optimization, scheduling, and system infrastructure modifications.

It is still being determined why some providers opted not to change their practice. Some of our higher-performing providers felt there was no benefit to exceeding the institution's wRVU goal as our institution had eliminated its productivity incentive. Providers with static low wRVUs commonly reported feeling that a physician's role did not include financial management. It is not surprising that most of our static, lower-producing providers opted to change habits and templates after our system's announcement that it was being acquired and the heightened scrutiny and pressure that followed. Fortunately, AI coding is in development[20,21] which could lessen the need for providers to have expertise in billing and coding. Future applications of this method will be used for executive-level departmental planning. For provider teams who manage time-consuming diseases like multiple sclerosis and dementia, this process may help demonstrate value and create structured ways to identify the impact of new billing opportunities. We continue to iteratively improve our process, expecting that with the advent of machine learning, we will unearth new financial indicators as well as ways to apply this process to other key performance indicators like access, patient satisfaction, and resource utilization.

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The authors report no relevant disclosures. Full disclosure form information provided by the authors is available with the full text of this article at Neurology.org/cp.

Publication History

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Edward Stefanowicz, MBA	Neuroscience Department, Neuroscience Institute, Geisinger	Drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; study concept or design; analysis or interpretation of data
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Trudi Dempsey, MSOM	Neuroscience Institute, Geisinger	Major role in the acquisition of data; analysis or interpretation of data

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