

# Effects of Real Time Feedback on Radiologist Productivity and Practice Profitability

By tracking real-time workflow data and comparing it to our practice goals, *Helix<sup>®</sup> Pace* analytics prompted dialogue and supported decisions resulting in changes within our radiologists' practice. The changes were evident by immediately, improved productivity, financial gains, and, best of all, happier radiologists.

*Helix Pace* is unique in its real-time feedback for busy clinicians and administrators in community hospitals and major national and international brand hospital systems. *Helix Pace Academic* is a web-based, zero-footprint platform using Hawthorne Effect psychology to improve productivity and performance.

*Helix Pace* provides features, data, and insights not found in other practice-support systems. Our evaluation of Primordial, Powerscribe and large EMRs such as Epic suggests that none have comparable capabilities in one package. Our patent pending formulas and processes provide physicians with operational and productivity insights not available elsewhere.

We have field-tested this product for seven years across multiple sites, and it has embedded itself seamlessly into all workflows and systems. Advantages of *Helix Pace* have been vetted nationally and internationally.

*Elizabeth Bergey, MD President and CEO, Quantum Imaging and Therapeutic Associates (QITA) Lewisberry, PA 17339*

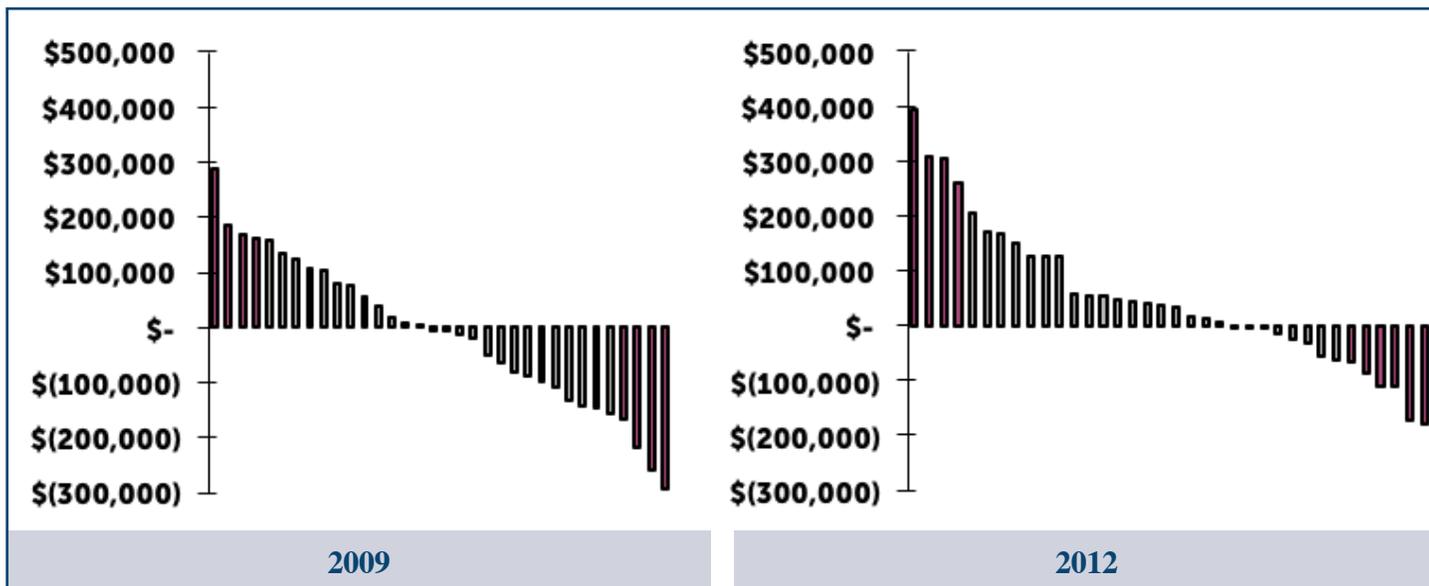
## HOW HELIX PACE IMPROVED OUR COMPANY'S EFFICIENCY

When our group, Quantum Imaging and Therapeutic Associates, implemented *Helix Pace* in 2009, we noticed our most productive radiologists were experiencing significant job dissatisfaction as reimbursements were being cut and salaries were in jeopardy. Worse, the most productive radiologists felt that they were carrying the group and were, not so quietly, disgruntled. Turns out, they were right.

At that time, Quantum had 16 daytime (8 am-5 pm)

seats where radiologists were assigned to work each day. To cover vacations, etc., approximately 20 radiologists were needed for this work requirement. Each radiologist's total compensation cost about \$500,000 per year. Total radiologist daytime costs were \$10 million—by far, Quantum's largest expense.

Within two months of using *Helix Pace* we found significant increases in our radiologists' productivity and a related gain in available workforce. Many of those in the middle third of the profitability curve now understood the expectation and easily rose to



Physician profit/(loss) after non-direct physician costs.

the task. There was also a significant increase in productivity among the highest producers, and even some positive change among the very lowest, but the middle really thrived. Most importantly, these changes were sustained over the years.

Within two months, we were able to reduce staffing by three radiologists and still assure that every case that was ready by 4:45 pm would be completed and signed before the team left for the day at 5:00 pm.

## Our group saved \$1.5 million or 15% in radiologist compensation in just two months.

The financial benefits have continued, and our radiologists average greater than the 75% in MGMA productivity<sup>1</sup>, despite an unfavorable work environment including extensive non-revenue producing activities such as teaching and caring for complex inpatients.

Management of the radiologist workforce is easier, less personal, and more objective. Leadership can now address issues promptly and dispassionately. The information generated can be used to support decisions on hiring, modifications in operations, and in

objectively bonusing physicians. The reports can also be used to justify CMS teaching funds, summarize the performance of the entire department, and predict outcomes in hiring.

### NON REVENUE PRODUCING WORK: IMPORTANT TO THE PRACTICE'S SUCCESS, BUT HOW CAN IT BE MANAGED?

The tool's metrics help leadership to predict the setting in which each radiologist will be most successful. Not all work of a radiologist produces revenue. There are many interruptions and tasks during the clinical day that are labor intensive and do not result in billable RVUs. How do we monitor, manage, and value all of those clinical consults, protocols, tech questions, conferences, and even teaching? Is it even possible to manage this work? Yes, it is.

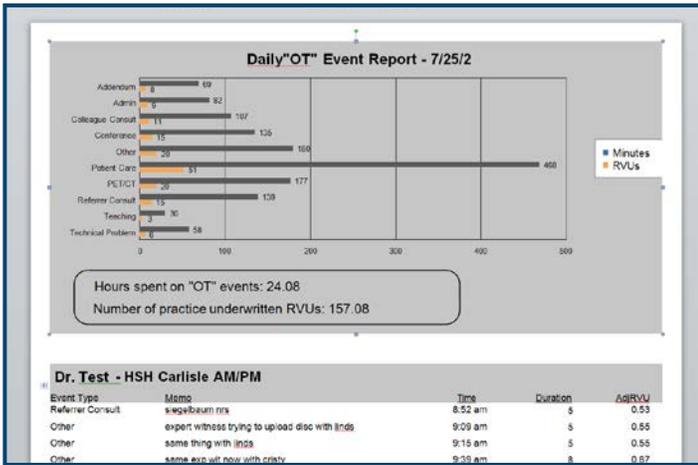
*Helix Pace* allows the entry of non-billable work (OT) and transforms it into clinical RVUs based on a complex formula using historical and current RVU/hour work rates. These OT events can then be monitored, reported, and managed so that the chair and section chiefs better understand the total responsibilities for the section and which radiologist is efficient and effective at performing non-revenue producing work. It also provides an objective basis on which a chair can confidently reward those who excel.

## HOW THE USER INTERFACE WORKS

*Helix Pace* can be run in the background after a RIS HL7 interface is developed. Otherwise, a radiologist must click on the customized palette after the report is complete. We timed the clicking after a radiologist was trained and using *Helix Pace* for two weeks. Total time per shift to enter clinical data was six minutes. That's six minutes well spent.

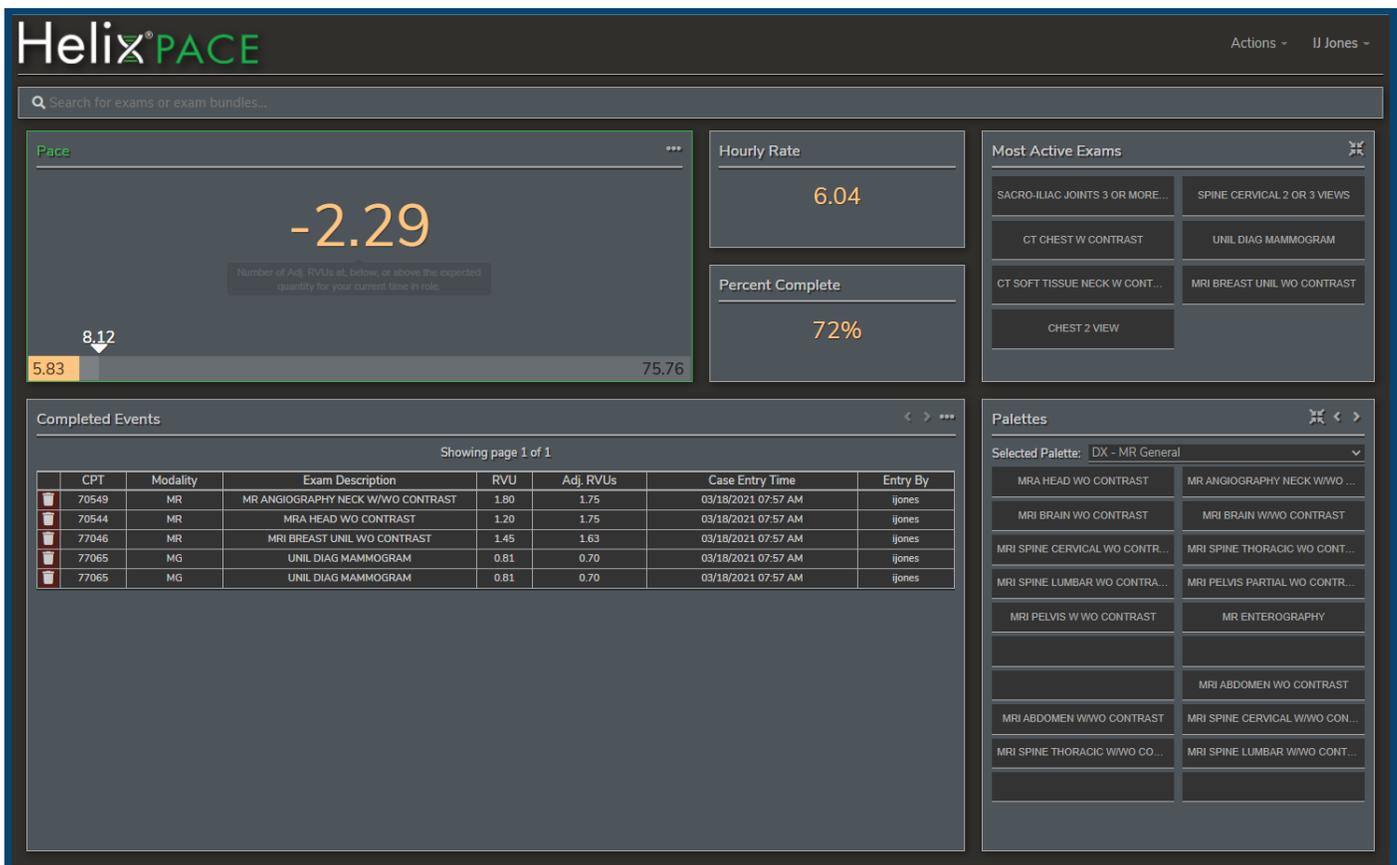
The shift target can be static or dynamic. Static targets can be set for each seat in the department, according to realistic expectations and practice financial goals. Conversely, a starting dynamic target can be set for each seat and depending on the radiologist's trends that day, the target can change with each entry.

For example, if a MSK radiologist is reading many plain films, his/her starting target may be 60 wRVUs, but decrease throughout the day as reading 300 plain

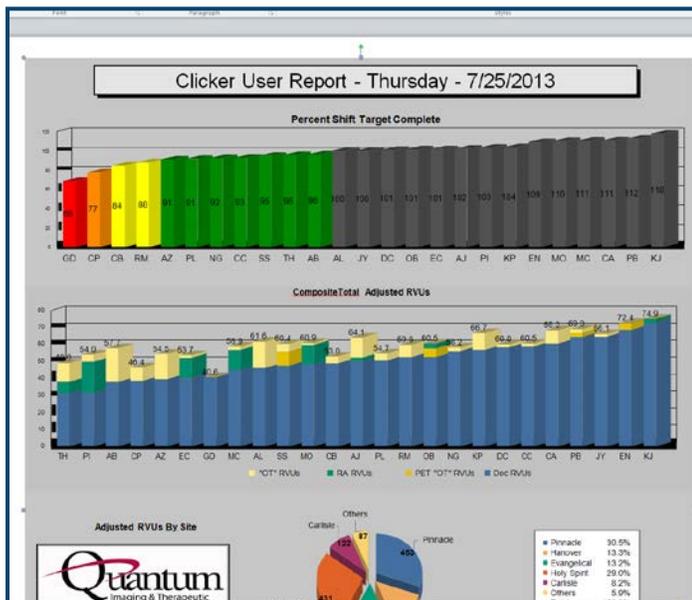


Report for daily "OT" events.

*Helix Pace* analytics help decrease training expenses as new hires better understand expectations, and their progress and productivity can be tracked and monitored. Costly problems can be uncovered and managed expeditiously and efficiently. Now with full objective data sets, employment law situations can be simplified.



Dashboard showing RVU target, current RVUs, exams, etc.



A sample daily report.

films would be required to generate that number. That is not realistic. However, a fair day's work may be considered 200 MSK plain films and if reading predominately plain films, the target will adjust to a final target of approximately 40 wRVUs. If conversely the radiologist is reading MSK MRI, they may have a corresponding increase in their target, finishing the day with a 90 wRVU target.

### CHERRY PICKING MADE EASY

To drive behavior, we can change the RVU value, ascribing more or less value to certain CPT codes. This balances the effort/reward for each CPT code. Now equalized, previously unwanted procedures “magically” disappear from the list instead of lingering in the “unread” status. This tool is used only to keep all physicians maximally productive.

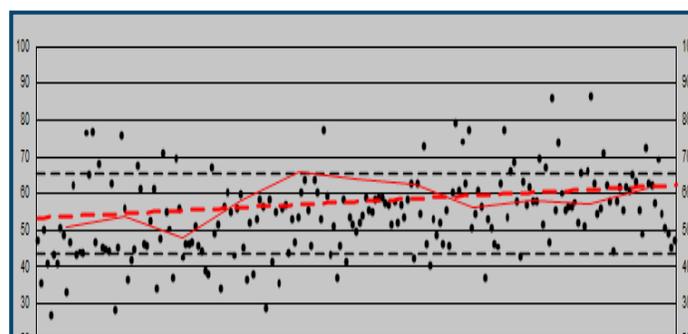
We understand that even a productive physician may not be profitable. There will always be loss leader studies and procedures, and someone has to do them. We maintain billing data to assess physician *profitability* and use this tool only to manage physician *productivity*.

### ANALYTICS

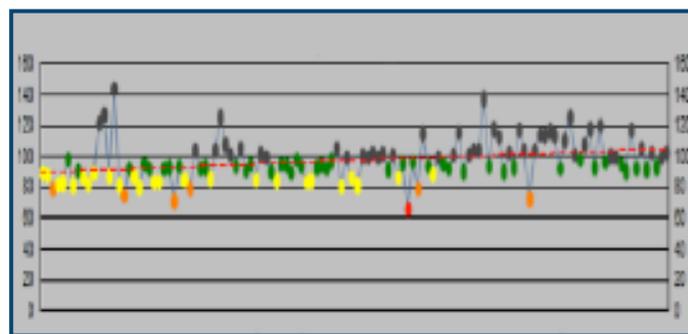
Reports can be shown to outlying radiologists detailing both problems and improvements. We have found that this data has helped remove the emotion

from productivity dialogue with under performing radiologists, greatly facilitates evaluation sessions and lends confidence to bonus decisions. These reports can be sent out to all radiologists every day and/or can be targeted to radiologists over a set time interval.

We recommend direct quarterly notification of a radiologist's performance to start. The radiologists get a graphic representation of their performance in each seat where they perform clinical duties with a comparison to all others including a trend line. They may have one to eight of these reports depending on their versatility within the department. They would also get an overall complete of target percentage graphic with color-coding for emphasis.



Seat report (X =date, Y=#RVU achieved on that date)



Percentage complete report (X=date, Y= % of target achieved at end of shift)

### ACADEMIC CONSIDERATIONS

Specific to academic radiology, resident feedback is confidentially documented in REAL TIME after each teaching session. The scores are then used to objectively measure quality in teaching. Data regarding academic papers and presentations is also compiled so that a conversion to equivalent RVUs can be carried out based on the radiologist's ongoing average clinical weighted RVU/hour. A Teaching modifier (T mod) is calculated based on

## ACADEMIC SCORE CARD



**DR. MILLER - Resident noon Body Imaging Conference - March 7, 2016**  
**Attendees: 15**  
**Conference Length: 60 minutes**  
**Average Attendee Rating: 4.2**

teaching performance. Based on the assumption that a good teacher requires an extra 20% of time to optimally teach a resident during a read out, the multipliers are likely going to be from 0.8-1.2 but are customizable.

A Section modifier (S mod) can be applied to equalize differences in section opportunity to even the playing field when comparing RVU/hour values. For example, a Pediatric S modifier may be 1.5, while a neuroradiology modifier may be 0.8. Again, these are customizable.

The time allotted for academic pursuits can be translated in opportunity cost and lost clinical wRVUS.

The goal at the end of an academic/fiscal year is to calculate an apples-to-apples score for each radiologist, considering their clinical RVU performance, their teaching acumen, and their research quality and production:

$Total\ Radiologist\ wRVU\ (TRwRVU) = TRwRVU = Adj\ CL\ wRVU + Adj\ AC\ wRVU$

Where Adjusted Clinical wRVU =  $Adj\ CL\ wRVU = CL\ wRVU * T\ mod * S\ mod$

Where Adjusted Academic RVUs =  $Adj\ AC\ wRVU = Adj\ CL\ wRVUs/hour * AC\ multiplier * \#AC\ Hours$

This TRwRVU can be used to more objectively bonus radiologists, support advancement decisions, and allocate resources such as clinical time. It provides data points for predictive analyses regarding hiring and optimal allocation of radiologists. It has even suggested alterations in the model for care delivery in our institution and may similarly within yours.

We have found that the *Helix Pace* is easy to use and can be integrated into RIS or EMR so that minimal radiologist time is spent recording data. Non-revenue producing work will always be entered manually, but maintenance of this database has lent us valuable insights, critical to the understanding of the operations of the department. Through its use, we understand in far greater detail than ever before the operational efficiencies and inefficiencies present in the modern practice of radiology. We are finding these insights especially useful as radiology begins the expected transition from a profit to a cost center.

These unique data points and their analyses are used in our predictive analytics. They are shifting our paradigm of care delivery and directing us in modeling departments of radiology for success in the future.

QITA is a rapidly growing, large, full service \$30,000,000/700,000cpt/year private radiology practice currently providing professional services to 7 hospitals, 5 health systems and several imaging centers.

### REFERENCES

1. 2015 MGMA compensation survey