



# Become Indispensable to Your Imaging Partners

Creating Strategic Value for  
Radiology by Developing  
Partnerships and Offering Insight

*A Practical and Tactical Guide*



**How can radiology become an indispensable partner?** By bringing value to its imaging partners that goes beyond just providing quality interpretation services. Such services are the expectation; there needs to be more.

The additional value comes from answering important clinical and operational questions such as:

- There is a concern that too many MRIs are being ordered in the ED. How can radiology confirm and—more importantly—help minimize this overutilization? How can we address this in a nonconfrontational manner with physicians?
- How can we define and measure quality in the ED when ordering imaging examinations without causing disruption in the diagnostic care cycle? Likewise, how can we define and measure quality from a radiologist interpretation perspective?
- The hospital CMO wants to know how radiology can work with the clinical staff to increase outpatient volumes and decrease inpatient imaging to help control costs. Are you able to measure and prove this?
- How can radiology help the VP of operations build a case for imaging-equipment procurement or support a decision to hold off on new purchases by shifting workflow between existing modalities?
- Oncology is convinced that radiology must hire another Interventional Radiologist. Do we have the volume to support such a hire?
- How do imaging volumes compare with other facilities like ours? How do imaging volumes compare to national benchmarks?
- Should we invest in expanding our services to include women’s imaging? Do we have the patient population to support this? Are there other opportunities for imaging growth that we’re just not seeing?

Radiology must have data to answer these questions. Radiologists will hear such questions more frequently as healthcare adapts to a pay-for-performance model. With data, radiology can lead fact-based discussions around issues of quality, value, performance and growth—all based on insight vs. emotion, politics and best guesses.

Radiologists must rethink and take control of how their specialty can affect the hospital ecosystem. Taking control means measuring and managing efforts like never before to improve utilization, decrease costs, and positively impact performance and the quality of patient care. If done correctly and strategically, radiology becomes an indispensable strategic ally to hospital partners. If done poorly or not at all, radiology becomes a cost center to be managed. It’s that simple.

*“The future of radiology is bright; the future for radiologists is far less certain.”*

**Lawrence R. Muroff, MD**  
**Diagnostic Imaging, May 2, 2014 Practice Management Blog**

## Section I: The End of the Golden Era

Radiology plays a critical role in patient-centered care and should be held in higher regard. Yet many forces have led to higher scrutiny within the hospital:

- ***The advent of picture archiving and communication systems (PACS)***

In the 1990s and early 2000s, PACS led to greater radiologist efficiencies around delivering interpretations and diagnoses. The result was that radiologists were treating more patients as a result of higher volumes. While more efficiency can drive down costs, in a fee-for-service model, however, higher volumes resulted in higher compensation, which ultimately put radiology under scrutiny as incomes skyrocketed during the “Golden Era of Radiology” in the late 2000s. Additionally, PACS allowed radiologists to remain within the four walls of the reading room, further distancing the profession from referring physicians and hospital administration.

- ***Declining reimbursements***

Radiology began to see reimbursements decline with the passing of the Deficit Reduction Act (DRA) of 2005. And the Patient Protection and Affordable Care Act (PPACA) in 2010, which instructed CMS to “find and adjust misvalued medical services,” made the spotlight on radiology even brighter. When policy makers realized that radiology volume was experiencing disproportionate growth among the Medicare population compared with other medical services in the early 2000s, they began to target the specialty. And since private payers take their cues from CMS, many have enacted similar reductions in reimbursement.\*

Since radiology reimbursement has declined 25 percent over the last five years, working harder for less increasingly will be the norm—but it is not a long-term solution. As a result of cuts coming from all directions, radiologists’ revenue will likely continue on a downward track.

- ***Fee-for-value migration pushing radiology to demonstrate value in a new way***

Hospitals and health systems are experiencing cost-control pressures that are forcing significant changes in healthcare delivery. Slowly, many are shifting from a fee-for-service (FFS) to a fee-for-value (FFV) reimbursement model, since many see this approach as part of the solution. FFV reimbursement models are increasing the need for evidence-based medicine and complete transparency into quality and economic performance. In the new healthcare world, radiologists won’t get paid for quality if they can’t prove it. And they can’t prove it if they don’t measure it.

For its hospital partners, radiology’s value begins with diagnostic accuracy and quality, which is not a vague and nebulous concept or equation. Quality is a simple matter of whether or not a critical finding was identified or a specific and accurate diagnosis rendered that led to a good patient outcome.

FFV models require radiologists to establish new ways to define and measure quality. Radiology must demonstrate a vested interest in ensuring quality, diagnostic accuracy and accountability, which includes objectively measuring and validating accuracy rates of diagnostic interpretations to show a positive effect on patient care long term. This approach aligns with the new delivery models that focus on quality over quantity.

\* Source: <http://www.healthimaging.com/topics/healthcare-economics/sinking-reimbursement-survivors-guide?page=0%2C1>

- **Platform discordance—better use of technology needed for a digital specialty**

There is an overwhelming amount of healthcare data, but a lack of actionable information. Actionable insight is required when moving to a value-based reimbursement model. Existing systems (RIS/EMR/Billing Systems) lack methods to develop actionable insight from data because they are not designed to provide the information and insight demanded by this changing environment.

For example, a RIS provides basic data (e.g., modality type, volumes, date and time, and referring MD) required to schedule radiologists and manage practices. RIS outputs data to see if radiologists are busy. EMRs provide up-to-the-minute patient information, and billing systems provide financial and claims data. Such scheduling and transactional data is not meaningful for quality measurement because it is typically disparate and not normalized—that is, it is not an “apples-to-apples” comparison—within a hospital system, or across many hospitals served by one radiology group.

Radiology has been slow to adopt technology that can drive efficiency and quality by removing administrative burdens, automating objective information gathering and helping to focus radiologists on image interpretation.

Any objective study data should be automatically included in any report, and any task not directly related to the interpretation of an image should be automated or otherwise offloaded. Used in an integrated manner, technology can make vast improvements by aggregating patient information and eliminating distractions. Both can have a huge impact on the patient care and referring physician satisfaction.

As a result of these pressures, radiology practices have tried to find more levers to pull to relieve this pressure, but they are running out of time and options. They are finding no more levers to pull, having tried various approaches:

- Work harder by “taking back the night”; but working harder is not working smarter. While some have taken back “Deephawk” or “Midhawk” shifts to secure more reading volume, this strategy has a major challenges.



For example, this hypothetical group’s RPC Indices report (see chart on left) indicates that while the Deephawk, or overnight shift, accounts for nearly half of all working hours, this shift drives only 11 percent of total Relative Value Units (RVUs) and only 14 percent of total imaging volume in a 24-hour period. By comparison, the “On-site,” or daytime shift, is the most productive, accounting for 70 percent of all RVUs and 67 percent of daily volume. The Midhawk shift offers only 35 percent of total RVUs, with 19 percent of total working hours.

For most radiology groups, trying to staff and manage the Deephawk shift is expensive, inefficient and misaligned with the goals of hospitals and physicians for a cost-effective and high-quality solution with access to the right subspecialists 24/7.

Additionally, skeletonizing Deephawk coverage, usually relegated to a single radiologist for most facilities, prohibits continuity of care 24/7. A single radiologist simply cannot provide the level of subspecialty coverage required in today's 24/7 healthcare environment. Also, if that person is pulled into a procedure, goes to lunch, takes a break, and so on at the time of need, turnaround time suffers—or worse, patient care is compromised.

Gone are the days of just working harder and reading more scans to make up for lower volume and reimbursement. Radiology has all but reached a point of diminishing return: Working longer hours for the same amount of compensation is difficult for any radiology service model. Lastly, the sheer number of hours required to cover the deep nights (close to 4,000 hours annually, including weekends) is taxing and commonly unsustainable for many groups.

- ***Invest in technology***

When radiology considers how to evolve in healthcare's uncertain environment, many ask, "What technology will 'fix' our practice (or service line)?" But that is the wrong question to ask because technology alone is not the answer; it must inform a solution defined by the right questions, such as "What outcomes are we preparing for?" "What problems are we trying to solve?" "What do we want to look like once solved?" and "What analytics and data will be required to provide the insight I need to help me solve this problem?"

Installing a new PACS may address a set of immediate symptoms, but it does not cure the long-term need, nor does it normally focus on quality outcomes. Enterprise solutions are also costly, fraught with implementation risks and time-consuming to complete. Such an investment will not help radiology practices be more efficient while also providing higher quality service and value. Technology will not solve the problem of how a group delivers complete radiology services within a hospital or across a health system.

- ***Merge and consolidate groups***

In such scenarios, focusing on quality and outcomes becomes challenging at best and non-existent at worst. Such mergers tend to focus on integrating services, bringing cultures together and ensuring appropriate compensation. The focus on overall quality and efficiency usually are further down the list of priorities. Only when a group has become large does it realize how its size is an impediment to streamlining systems.

These tactical levers, especially on their own, will not elevate the value of the specialty and help hospital partners improve strategic issues—quality of care, cost control, treat-to-street times—that are becoming essential as healthcare moves away from FFS to FFV.

*"The traditional view of the radiologist as a physician who adds value to the healthcare system solely by generating and interpreting diagnostic images is outdated."*

**J Am Coll Radiol. 2007 Sep; 4(9): 626–635.**

## **“See the Light” of Data or Stay in the Dark**

Many perceive radiology lacking value beyond its function as a diagnostic tool. Many do not understand the potential value that insight—which can be gleaned from the vast amounts of patient and imaging data—can provide.

Since radiology touches a large percentage of patients and is often used early in a patient’s hospitalization, it serves as a reliable bellwether, foreshadowing what is to come during the remainder of the care cycle.

Furthermore, it is important to remember that radiology, by definition, is a highly digital specialty and can provide major benefits for telemedicine optimization. This digital specialty also offers the ability to normalize and analyze the vast amount of data radiology gathers to form the foundation of value-added analytics—for benchmarking and insight that is completely unavailable and absent in most specialties. This sets radiology apart from other specialties, which is important to keep in mind as radiology’s revenue-center perception devolves into that of a cost center to be managed.

Radiology must demonstrate its value by becoming a strategic partner in the shared mission of managing costs while improving quality, care and performance. To accomplish this, radiology needs to:

- Measure its own quality and efficiency in meaningful ways,
- Contribute to high-level strategic thinking/planning/collaboration with its imaging partners, and
- Change its collective mindset and find new ways to demonstrate value outside the reading room.

Radiology will not work its way out of this proverbial “black box.” Radiologists must think their way out of the “four walls of the reading room” and make decisions based on facts, not intuition or opinions.

They must engage with many different shareholders: referring physicians and patients as well as department staff and hospital administration. All must move in the same direction and have consensus on new accountable care goals that lie ahead.

In short, radiology must move past focusing on the issue of declining reimbursements and embrace change and see the new opportunity to demonstrate value. By demonstrating meaningful value and being a partner in solutions, radiology will change its perception from a specialty isolated in an ivory tower to a specialty able to understand change and take action based on evidence and data, rather than half-truths, intuition and self-serving opinions.

*“In God we trust; all others must bring data.”*

**W. Edwards Deming  
The Original Data Scientist, Engineer,  
Statistician and Management Consultant**

Due to its national footprint, vRad faced this issue of change and embraced the new normal in radiology before many other groups. By understanding the market shifts and accepting those changes, vRad began developing the tools and the initiative to thrive in this new environment. It saw how the need for evidence-based medicine and complete transparency into quality and economic performance was going to be a requirement for survival.

Radiology must be seen as providing value by measuring and documenting quality and performance. More importantly, it must communicate these insights in order to be seen as a strategic partner who deserves a seat at the table.

One thing became clear to vRad: in the new healthcare world, analytics were no longer an option; they were a requirement for survival.

## Section II: The Survival Guide

*“The challenge we’re facing is our inability to fundamentally and eloquently verbalize the added value we bring to every interaction... We have to be more specific in terms of demonstrating how beneficial we are to healthcare delivery systems, to referring physicians, and most importantly, to our society’s health.”*

**Alexander Norbash, MD, MHCM, FACR**  
**Boston University Medical Center**

### **In the Dark, Swimming in Dirty Data**

Many perceive radiology lacking value beyond its function as a diagnostic tool. Many do not understand the potential value that insight—which can be gleaned from the vast amounts of patient and imaging data—can provide.

Healthcare organizations continually struggle to hold back the flood of complex clinical data. Measuring radiology quality in any practical manner within this information overload—that is finding, gathering and using the best data to change or improve radiology processes—is extremely challenging.

Because of its size and scale, vRad had to adapt to changing times sooner than most radiology practices. vRad recognized this challenge after acquiring several on-site practices. By early 2013, it realized the opportunity to better manage its 24/7 practices and ensure the value it brought to patients and referring physicians.

Yet there was a lack of clarity around how the core teleradiology business interacted with on-site practices in hospital settings: Disparate data from 2,100+ facilities, 7 million studies and a myriad of different vendor products was both the challenge and opportunity. vRad could not use this large pool of non-normalized data to develop meaningful benchmarks and metrics to measure what was happening.

It was impossible to gain the insight necessary to make better decisions for patient care and the practice. To make the necessary clinical and operational decisions, the first step had to be to normalize the data. Normalizing data, as it pertains to healthcare, is a process that takes into consideration local anomalies and variances in data entry, and correlates them to one accepted and understood “gold standard.” In order to analyze and compare data from multiple hospitals and other healthcare facilities, data must be in the same “dialect” of radiology language in order to aggregate and define metrics.

Normalization is at the core of making radiology analytics a reality and insight possible. vRad saw this data normalization as vital to develop the granularity and flexibility required for index creation and metrics comparisons.

However, data normalization is one of the largest challenges facing radiology today. One hospital’s “ultrasound gallbladder,” is another hospital’s “ultrasound right upper quadrant” or “ultrasound liver.” Descriptions that facilitate the protocoling process are not standard across practices, even if they are all part of the same integrated delivery network with a common EMR. Normalizing data is a manual, tedious exercise due to variability in description and nomenclature. vRad realized that there is no way to draw meaningful comparisons across its client facilities (hospitals or radiology practices).

vRad looked for solutions to help normalize data and measure the value of radiology; existing solutions were at best, subjective, and at worst, lacking.

### Enter vCoder

Since there was no meaningful solution available to help normalize data in order to benchmark and find trends in this “dirty data,” vRad embarked on a plan to build technology and processes to normalize the vast amounts of data it had. vRad’s patent-pending vCoder was the radiology industry’s first data-normalization technology that assigned 23 unique attributes

## Getting to “Go”: Becoming Indispensable

Patent-Pending Data Normalization Engine Enables Radiology Analytics and Insight

**Challenge**

Variations in protocols used when coding images creates a challenge for hospitals and physicians to perform data analytics.

- Same image could be identified differently based on imaging scanner or technician

H

Foot - ER - STAT

H

Ankle - IP - Expedited

H

Lower Right Extremity - 23 Hour Observation Unit - Routine

- Currently no industry standardization of image-naming protocols
- Results are not directly comparable
- Unstructured form complicates analytics process

**Solution**

Patent-pending vCoder<sup>SM</sup> normalizes nomenclature from disparate facilities on 23 unique variables to enable standardized data analytics and reporting.

- Each image given unique patent pending vCoder – (VIN for radiology) a unique identifier for maximizing operational workflows and normalized reporting efficiencies
- Allows for analytics and benchmarks across multiple variables including: gender, age, geography, body region, facility type, etc. ([www.vrad.com](http://www.vrad.com))

Positions practices and hospitals to be better equipped to manage the transition from **fee-for-volume** to **fee-for-value**

to a single imaging study to qualify it in terms of modality, contrast use, body region, reading location and more. The vCoder normalized imaging data from any radiology group or hospital/health system by effectively “standardizing” radiology procedures based on CPT codes.



Once the vCoder normalized imaging data, vRad was able to develop analytics tools necessary to manage its own clinical, financial and operational practices. It allowed data from client facilities to “speak the same language” so that metrics could be established and objective comparisons made (i.e., benchmarking). Thanks to the vCoder, combined with vRad’s size and scale, vRad’s clinical database is a national projection of the U.S. market.

After getting its data house in order, vRad saw an opportunity for radiology groups and hospital imaging departments to also objectively compare their own use of imaging performance—even to relevant peer groups, given the need for evidence-based medicine and transparency into quality and economic performance. As part of this effort to help clients and the industry, vRad developed a portfolio of analytics tools that addresses the continuum of our clients’ needs:

- **Radiology Patient Care (RPC<sup>SM</sup>) Indices**, which is the first findings-based national benchmarking metrics for the use and effectiveness of computed tomography (CT) imaging in the ED nationwide. Launched in November 2013 and derived from vRad’s clinical database of more than 30 million imaging studies from over 2,100 facilities in all 50 states, the RPC Indices are a “living library” of statistically significant metrics that provide hospitals, radiology groups and health systems with objective comparisons of their use of imaging to national averages and relevant peer groups.

vRad began with CTs in the ED given the important role EDs play in the cost of healthcare, accounting for approximately half of all U.S. hospital admissions. They also serve as advanced diagnostic centers for primary care physicians, according to a RAND Corporation study, released in May 2013, which also found that office-based physicians direct patients to EDs rather than admitting patients to hospitals themselves.\*\*

- **Teleradiology Metrics Reporting**, which provides standardized performance metrics to help vRad clients gain insight into important teleradiology services such as imaging volumes, turnaround times, critical findings and other ad-hoc reports.
- **Global Practice Information (GPI<sup>SM</sup>) Reporting**, which provides a 24/7 look inside final clients’ radiology practices, including radiologist productivity information using read volumes and RVU analysis, facility- and modality-specific details, subspecialty breakdowns, and other metrics for effective overall practice management.
- **Hospital Insight Reporting**, which helps client hospitals and health systems develop comprehensive analytics for their radiology service lines. Through normalization of hospital data, vRad can provide customized monthly and on-demand reports.
- **Custom Advisory Solutions**, a professional service that assists growth-minded partners with creating radiology service lines, operational planning, process improvement, utilization management and staffing strategies.

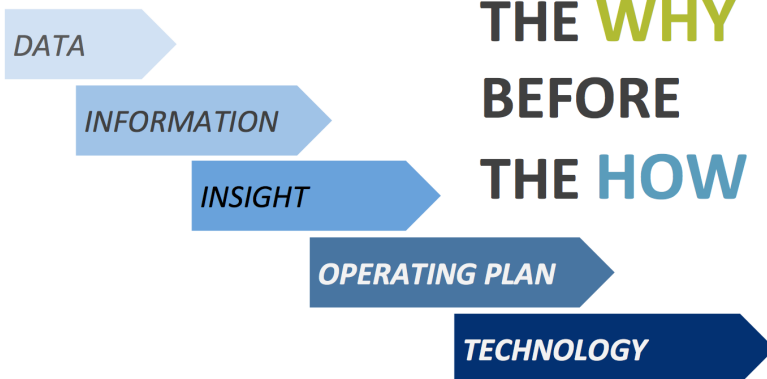
### **Get to the “Whys” of the Problem before the “Hows”: Building the Operating Plan**

Once data is normalized, you can extract clinical, financial and operational information from the data, which provides a “picture” of what is happening within a practice, hospital or health system (i.e., a “look in the mirror” view). With this visibility, you are in a position to understand why things are happening (e.g., why is outpatient imaging low compared to other facilities like mine) and develop a plan of how to change them. This is in stark contrast to the current approach of applying anecdotal (i.e., “knee-jerk”) solutions to complex imaging problems, usually in the form of technology acquisitions.

\*\* Source: <http://www.rand.org/news/press/2013/05/20.html>

## The Bottom Line

It's more than a technology solution ...



With insight into the “whys,” radiologists are in a better position to figure out the best “hows” for their practice and begin to build an operating plan. This plan involves answering three questions:

1. *What problems do we want to solve?*  
What does the picture tell us about our practice? Are we seeing leakage? Are we staffing appropriately?
2. *What outcomes do we want?*  
What do we want to look like when we are done? Do we want to grow our staff? Do we have the volume to support new hiring?
3. *What analytics do we need to be able to measure outcomes?*  
What data do we need to look at regularly to ensure that we are building our practice appropriately?

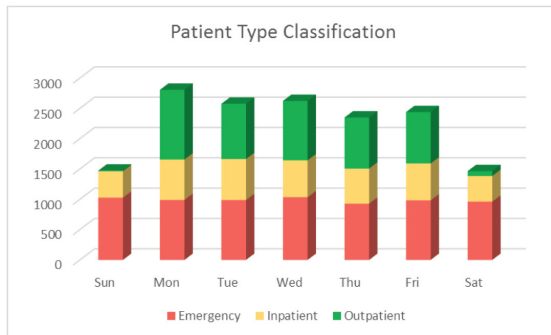
By having access to normalized data, radiologists can understand it, can measure it, and—once it is measurable—radiologists can improve it. That is the benefit of embracing and leveraging radiology analytics at a national scale.

Following are examples of how data can help radiologists understand their operations in ways that allow them to share value and become an indispensable partner:

- **Analyzing patient type volume by days of the week**

In this instance, data shows a breakdown of emergency patients, inpatients and outpatients. While emergency and inpatient volumes are steady, there is a dip in outpatient volumes on Thursday, Friday and Saturday. One

### Analysis: Patient Type Volumes By Days of the Week



**Key Observation:**

- Outpatient volumes are dipping on Thursday and Friday and considerably lower on Saturday & Sunday.

**Key Consideration:**

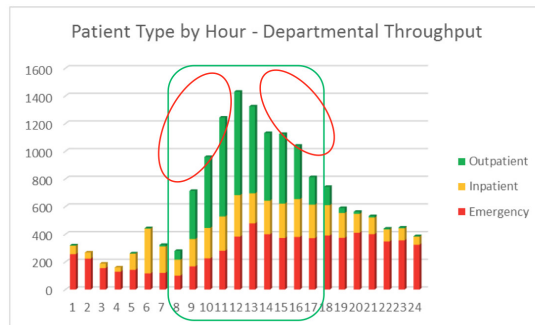
- Add Saturday morning outpatient imaging slots to increase Saturday volumes.

Thursday, Friday and Saturday. One consideration would be to add appointment hours on Saturday to schedule and accommodate more patients. Another would be to extend hours on Thursday and Friday.

- **Analyzing 24 hours in the radiology department**

This graph shows a bell curve in terms of the types of patients seen in a 24-hour period. It shows that the majority of daily volume (67 percent) occurs during the daytime (8 a.m. – 6 p.m.). It also shows that the least (14 percent) occurs during midnight to 8 a.m. and only 19 percent of the volume occurs from 6 p.m. to midnight. This shows how a practice can

### Analysis: All Patient Types By Hour (Day in the Department)



**Key Observations:**

- Plenty of room for additional imaging slots mid morning and late afternoon
- 14% of the daily volume occurs between Midnight and 8:00 a.m. (Deephawk)
- 67% of the daily volume occurs between 8:00 a.m. and 6:00 p.m. (On-site/daytime)
- 19% of the volume occurs between 6:00 p.m. and midnight (Mid-hawk)

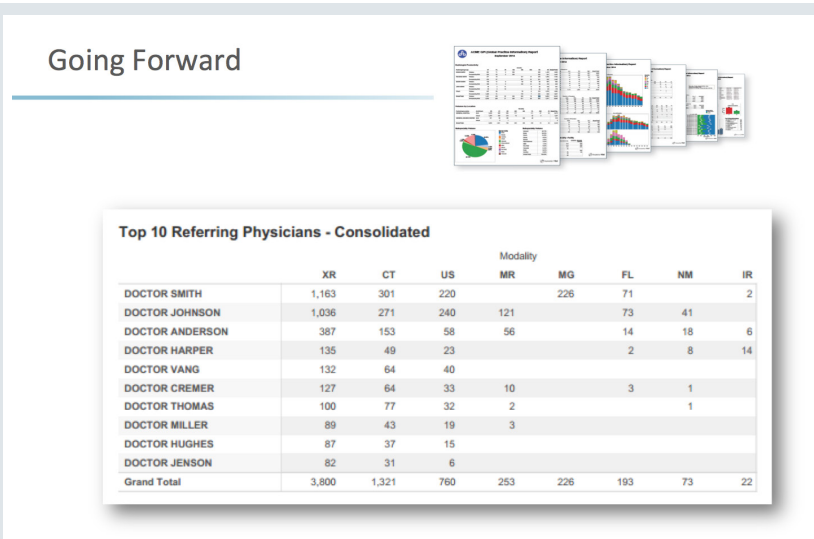
**Key Consideration:**

- “Shift up” your staffing to cover the more concentrated and higher value imaging during the day.

“shift up” and cover the more concentrated and higher value imaging during the day. Shifting up also allows groups to stagger start times and easily cover the Midhawk shift. As a result of this shift, a radiology department can typically open more outpatient slots earlier in the day and into the early evening, if needed. A practice may also want to consider bringing on additional staff during the day or staggering shift start times so radiologists can address the increase of inpatient cases in the early morning, as well as addressing the increase in emergency cases in the early evening.

- *Volume by referring physicians*

This report shows the top referring physicians and their referring patterns by modality, providing insight into who is utilizing imaging services and who is not. Such information



can help begin discussions as to why some physicians are referring patients or not. This type of dialog can uncover issues to resolve. It can also be a way to thank and engage top referring physicians to establish better relationships and improve communication and collaboration.

- *Results outcomes by radiologists and referring physicians*

This report provides a view into how imaging is being utilized by the referring physician population. Specifically, when a study is ordered and how frequently are there findings



present in what was ordered. When we contrast one referring physician's ordering habits (clinically) to other referring physicians of the same specialty and review how frequently findings are present, we have collaborative and retrospective decision support. This type of reporting is possible using NLP

(Natural Language Processing), along with other available metadata to unlock qualitative information. This is another way we can "see inside the data."

This information can help radiologists understand which referring physicians have findings present in studies ordered, how imaging is being utilized and how effective it is. These kinds of analytics can be the starting point of discussions around ordering practices and patterns.

These examples show the power of imaging analytics, which starts with asking the right questions—and finding answers to questions you didn't even think to ask. Once radiologists can “see inside their data,” they can then develop a fact-based operating plan (the “whys”) in order to structure, prioritize, and manage technical and clinical resources (radiologists and referring physicians) as well as operational workflows (the “hows”). This process allows for insights and decisions not based on opinions and conjecture, but rather on actual performance; reality is a much better metric to use to improve outcomes.

## Section III: Think Differently. Think of Others.

But seeing inside their data and understanding how their practice operates are only part of the equation of becoming an indispensable partner. The other is taking the initiative to share this insight and working with other partners to align radiology's operating plan with your hospital's strategic initiatives to affect positive change. Radiologists must know the hospital's service delivery direction and how they “fit” into strategic imperatives.

Radiology must be the one shining the spotlight on the use of imaging and partnering on operational decisions to improve efficiency and value to patients and hospital administrators. Opening communication channels with hospital administration about such objectives puts radiologists in a leadership role to discuss and develop innovations and solutions consistent with the hospital's strategic imperatives. Furthermore, starting these conversations with evidence and data rather than opinions and conjecture will demonstrate how radiology can add strategic value to efforts that can help improve patient care.

Reimbursement declines have resulted in radiologists “circling the wagons” around what was left. While the industry must be smart about managing practices, hospital and payer contracts, becoming an indispensable partner involves thinking differently and gaining a new understanding of the mindset of hospital partners to better help the patients that everyone serves.

It helps when radiology leaders learn to think like a(n):

- ***Hospital CEO, COO or CFO***  
Learn the language of business. Be focused on results. Master the hospital's vision, mission and core values, and find opportunities to align your practice around shared goals. Hospital executives want win-win scenarios. Consequently, radiology groups can no longer be provincial in their attitudes. They must set aside self-interest and determine how they can help their hospitals and patients benefit.
- ***Entrepreneur***  
Radiology groups have a history of entrepreneurship, which is what makes them perfect partners for hospitals in the current environment. The key is shifting that entrepreneurial focus to include the goals of partners.

Zappos CEO Tony Hsieh says that his company is a “customer-service company that happens to sell shoes and clothing.” By saying you are a client-service business that happens to provide radiology services, you shift the focus outward to your partners. The goal is now about satisfying and pleasing others, which can build trust and a positive reputation.

- *Hospital trustee*

Board members care about everything important and critical to good healthcare in a community. This includes aspects from patient safety to quality of care, growth and financial stability. Medical imaging can be a potential driver of innovation and diversification, and that can set your health system apart from the competition. As consolidation among providers continues, health systems must prepare for similar action from rivals. Centers of excellence are becoming priorities in strategic planning sessions and are often built around imaging as the central pillar, which can add significantly to a mission of clinical excellence, quality, service and top-echelon health outcomes.

Radiology needs to be in the board room as these possibilities are discussed and strategies planned. It must also understand how its operating plan can be used to build high-quality services for the community.

### **Conclusion: Data Leads to Insight, which Leads to Collaboration and Value**

When the right imaging services are delivered in a timely manner, there is a cascade of positive effects that include accurate diagnosis, effective treatment and greater cost-efficiency with patients getting healthier, spending less time in the hospital and using fewer scarce hospital resources.

Radiology analytics are the best way to drive evidence-based discussions with hospital partners and show that radiology can add value and be an indispensable partner. That's good for radiology, patients and the practice of medicine.

*“Measurement is the first step that leads to control and eventually to improvement.*

*If you can't measure something, you can't understand it.*

*If you can't understand it, you can't control it.*

*If you can't control it, you can't improve it.”*

**H. James Harrington, PhD**

### **About vRad**

vRad (Virtual Radiologic) is a leading outsourced radiology physician services and telemedicine company with over 350 U.S. board-certified and eligible physicians, 75% of whom are subspecialty trained. It is a wholly owned subsidiary of MEDNAX, Inc., a national medical group specializing in neonatal, anesthesia, maternal-fetal, pediatric cardiology and other pediatric physician services.

vRad interprets over 5 million patient studies annually—and processes over 1.2 billion images on what it believes is the world's biggest and most advanced teleradiology picture archiving and communication system (PACS)—for its 2,100+ client hospital, health system and radiology group facilities. A winner of Frost & Sullivan's Visionary Innovation Award for Medical Imaging Analytics (North America) and a leader in imaging analytics, vRad provides access to the only radiology patient care benchmarking platform (vRad RPC<sup>SM</sup> Index) with 31 million+ normalized imaging studies, growing at approximately 400,000 per month. vRad's clinical expertise and evidence-based insight help clients make better decisions for the health of their patients and their imaging services. For more information about the company, including vRad's [2014 Frost & Sullivan Best Practices Award](#), please visit [www.vrad.com](http://www.vrad.com). For real-time updates, follow us on Twitter ([@vRad](#)) or “like” us on [Facebook](#).

## Additional Information: Top Survival Tips for Today's Radiologists

- ***“Radiologist, examine and interpret thyself.”***

As part of strategic planning, radiologists should step back and consider how they are perceived by hospitals and physician colleagues. How do these groups view your practices? Is radiology regarded highly? Is it seen as innovative and helping the hospital move forward or an anchor holding it back? Is it meeting expectations for coverage, service, quality and subspecialty expertise? Groups that measure up in terms of these questions are likely to be valued. Groups that think they have a secure franchise, yet are failing to meet expectations, are at risk.

- ***Know your data.***

Take emotion out of the equation; it can open new dialogues and create starting points. Starting with data points can allow a conversation to be more collegial than with declarative statements. For example, open a discussion with this kind of statement:

“We examined MRI data from the ED over the past six months, including comparing volumes and clinical outcomes against national benchmarks. The analysis raises interesting insights about whether or not we have a viable clinical rationale for ordering MRIs when other options are available. Let’s show you the data and the analysis, and explain what we mean so we can get to the bottom of this together.”

can be much more productive and informative than this:

“The MRIs being ordered in the ED are excessive and not improving clinical outcomes. You must curb utilization immediately.”

- ***Know the terrain.***

Do you know your top referring physicians and department chiefs beyond an anecdotal review? Do you meet with them regularly to discuss imaging performance? Do you know which physicians consume the most imaging? Are you competing with any imaging centers owned by physicians affiliated with your hospital? Do you have allies in certain departments or in administration? What have you done to develop allies? Do you know which physicians or departments are “chatty whales” and “squeaky wheels” or have the ear of the CMO or administration?

- ***Know your value and focus on where you can make a measureable difference.***

Based on imaging volume, are you better off working closer with your Emergency Department or OB/GYN? What department is the “darling” of your hospital, and can you forge relationships with the leaders in that department?

- ***Understand and embrace the concept of “Future Shock.”***

Futurist Alvin Toffler defined the term as “too much change in too short a period of time.” By accepting that the only constant is change, you will have a better mindset to see opportunities to partner and be helpful.

- ***The reading room should not be known as “The Alligator Pit.”***

Start with the assumption that radiology needs to mend fences and fix perceptions. Assume that people call it The Alligator Pit and work to change that perception.

- *Write down the list of influencers that will benefit from regular meetings with radiology.* These can include:
  - Hospital CEO, COO or CFO (once a month or quarter)
  - The person in charge of imaging services (e.g., VP of operations or ancillary services)
  - Department heads (ED, Surgery, Orthopedics, Oncology, Outpatient Services, Women's Health)
- *There is more to life than money. There is wealth in relationships.* In this new environment, building relationships is the new currency. It will help you be more effective and productive. Align radiologists with departments (e.g., MSK with orthopedics, neuroradiologists with neurology) and have them take the initiative to develop ongoing relationships and find initiatives on which to collaborate.

## Additional Information: Top Analytic Trends to Help Gain Insight



- **Patient Type Mix**  
When comparing outpatient, inpatient and emergency patient mix, do you have the right balance of each? Is outpatient volume suffering in deference to inpatient volumes? Is there a path to correct some of that volume?
- **Imaging Department Throughput**  
Are you optimizing scheduling so you have the proper staffing to accommodate patient volumes and spikes? Can you increase utilization by finding time in the schedule to add imaging appointments (e.g., during lunchtime or on Saturdays)?
- **Modality Mix**  
Looking at modality can help to understand what is underutilized. Can you accommodate additional women's imaging, since women's imaging drives other imaging and other healthcare decisions (within the household)?



- ***Modality Volumes (on-site and teleradiology) by Time of Day***  
Reviewing these volumes can help optimize study distribution so that the right study goes to the right radiologist at the right time and the right place. Do we need to read all of one type of study (e.g., mammograms) on-site when there are specialists in the cloud that can help if studies are being delayed because an on-site specialist is unavailable? Can we move volume into the cloud at certain times of the day to help the on-site staff?
- ***Studies with Findings Present vs. Normal Findings***  
These metrics help to determine the efficacy of imaging being ordered. Are referring physicians ordering the right studies that are helping the diagnostic process?
- ***Referring Physician Ordering Volumes***  
The data can show which physicians are using imaging services. It can also show which physicians are not using imaging services, which can point to leakage.
- ***RVU-to-Study Ratio***  
This can help you to understand the overall health of the imaging service line.