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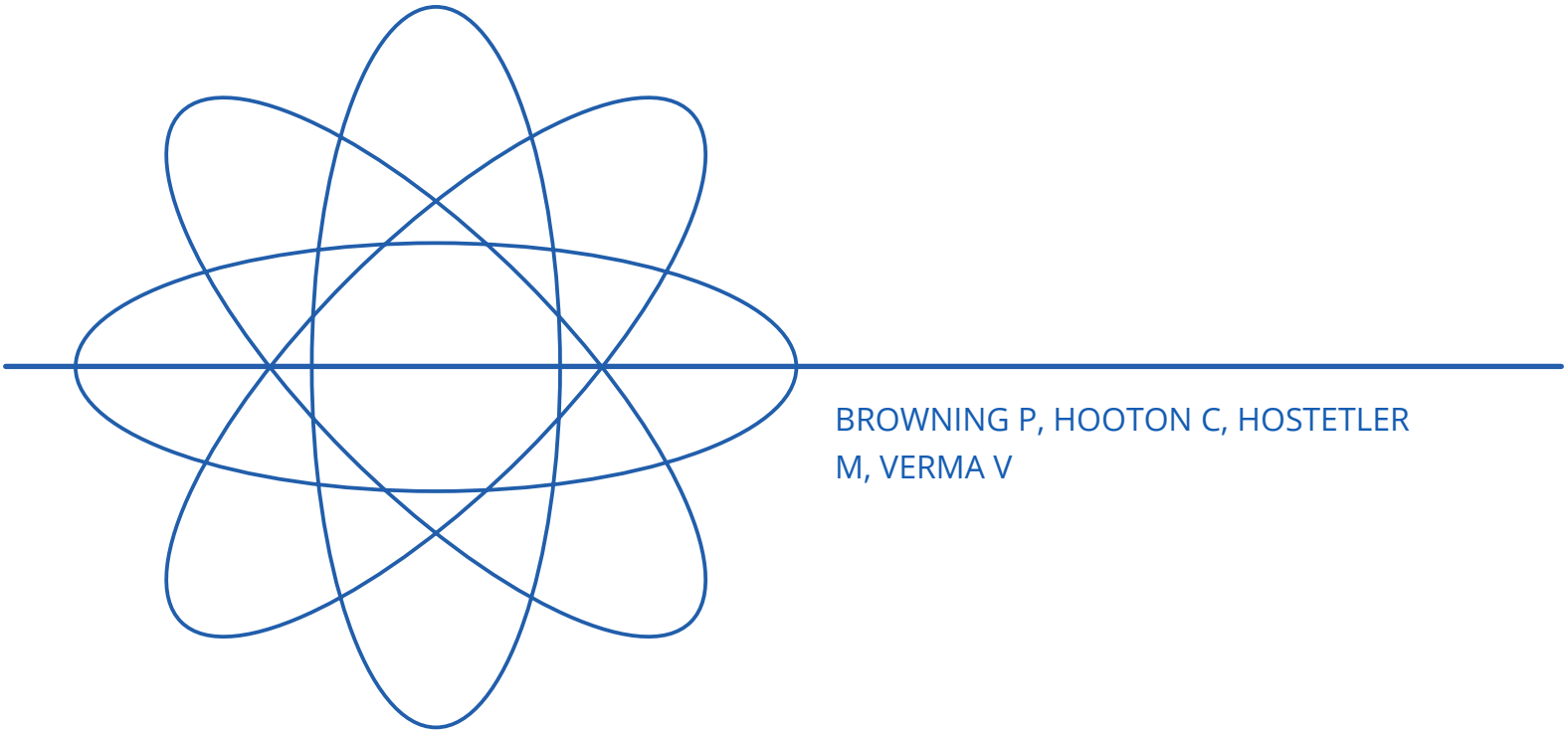
CONSIDERABLE VALUE REMAINS *in the* PRELIMINARY RADIOLOGY READ

A Primary Survey of Various Imaging Stakeholders



BROWNING P, HOOTON C, HOSTETLER M, VERMA V

About this Research White Paper

A recent white paper by the above authors (The Ever Changing Image & Practice of Radiology) outlined the key challenges facing today's private practice radiology groups. From continued corporate consolidation to the evolving role of the teleradiology partner, the authors outlined an operating framework and practical solutions to help navigate the ever changing landscape of the image management marketplace. Building from this foundation, the authors opined that the 'needs' of a given practice (both providers and consumers of imaging services) may indeed be influenced by a number of additional factors, including but not limited to the size and scope of practice. Furthermore, as evaluating 'general needs' would be too broad for the scope of this paper, the investigators narrowed their evaluation to perceived value of the overnight preliminary read—arguably ground zero for the teleradiology service industry. To test this hypothesis, the authors conducted a primary survey of various stakeholders. The aim of this paper is to both present the findings and provide perspective in our continued effort to optimize the practice of radiology, and more broadly, image management services.

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Materials and **Methods**

One of the above authors, a board certified senior radiologist with over 30 years of practice experience, conducted a series of in person and telephone interviews to X individuals over a period of X weeks. Interview participants were identified as members and leaders in one of three distinct stakeholders of image management:

1 **Radiology professionals.** This group was further classified as physician members of either small/medium (1 – 20 members), and large (over 25 members) groups. The majority of participants, regardless of the size of the groups, were involved in the practice of hospital radiology.

2 **Clinicians: Emergency Department (ED) physicians and hospitalists.** This group consisted of ER physicians followed by hospitalists, urgent care providers, and surgeons. Emergency department and hospitalist physician participants were members of very large, established medical groups, working almost exclusively at one physical location. This group also included feedback from clinical specialists (e.g., orthopedic surgeons), largely characterized as solo practitioners or members of very small professional groups, also almost exclusively working at a single location.

3 **Hospital administrators.** Hosptial administrators were both physician and non-physician professionals with an experience profile ranging from leadership of small community hospitals to larger regional healthcare networks.

Geographic representation included California (both northern and southern), Texas, Washington, Minnesota, New York, Utah, and the United States Military. All participants were assured of anonymity, and no patient identifying health information was communicated or transmitted.

Let's take a closer look . . .

1 Radiology **Professionals**

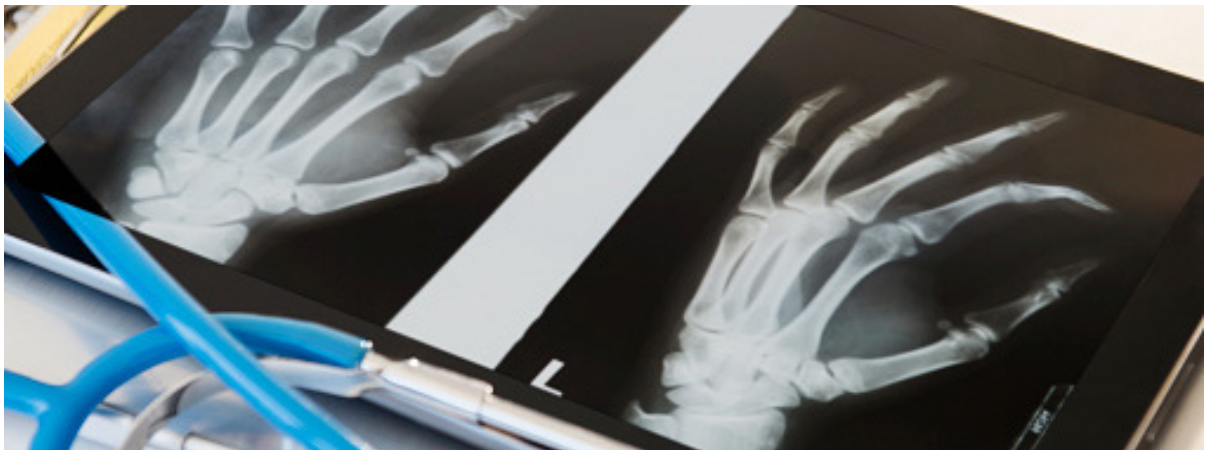
Participants

This group was further classified as physician members of either small/ medium (1 – 20 members), and large (over 25 members) groups. The majority of participants, regardless of the size of the groups, were involved in the practice of hospital radiology.

Findings

Large Radiology Practice Groups

This group assigned a relatively low value to overnight, preliminary reading services. Generally, the operating practice of these large groups was to cover overnight interpretation internally, citing the size of the group as a unique force mitigating the personal impact of overnight call. In addition to having a large denominator of doctors to spread the responsibility of night duty, these large groups often have the considerable and necessary technological infrastructure necessary to support timely, remote imaging services. Leadership of these large groups uniformly cited that this scale and scope allowed their group to remain “personally” engaged in the 1) quality of the results and 2) turnaround time, two key performance metrics of any image service provider (regardless of size). Finally, management of these large groups asserted that image solutions are often quickly delivered without the need for any external (e.g., teleradiology) consultations. In sum, large group practices saw little value in the preliminary read. In light of these findings, can one surmise that these sizable and largely autonomous professional groups have no possible need for an external preliminary read? While a tempting initial conclusion, we put forth later how such an assertion may be shortsighted.



Small to Mediium Radiology Practice Groups

In contrast to larger groups, small/medium size practices (as defined above as having between 1-20 professional members) held a very different perceived value of the preliminary read. The overall value drivers of overnight service to this group were:

- Preserving quality of life
- Maintaining a “read presence” in their respective clinical environment.
- Impact on group practice financial performance

Generally speaking, in regards to quality of life, the perceived value was inversely proportional to group size as fewer group members would naturally lead to a higher frequency and presumably greater stress of individual overnight coverage obligations. While maintaining a read presence for their referring peers was also identified as a key driver, this value was inherently dependent upon the perception (by both ED doctors and members of the practice group itself) of the overnight coverage group’s quality (accuracy) and speed (turnaround time). In other words, overnight reads resulting in a significant number of discrepant final reports is damaging to the group reputation.

As a consequence, members of this group spend considerable time and worry in maintaining a “favorable perception of the overnight reading company.”

The remaining key driver of perceived value was the financial impact of the overnight serve provider. For this subset, there is clear sensitivity around employing preliminary overnight coverage and the impact to group profitability and viability. For small/medium size groups with more attractive margins or lucrative contracts, they were more favorably predisposed to using preliminary coverage. Overall, these groups were price sensitive and therefore actively engaged in price negotiation with external service providers.

Around the topic of overnight subspecialty coverage, a number of respondents expressed concern about the balance between the remote ability to provide subspecialty reads and the local group's inability to provide such service. In other words, nighttime subspecialty coverage in the absence of daytime readings, could have the unintended effect of highlighting a group deficiency and ultimately represent a competitive threat to the local practice. This perceived threat, in the face of today's growing corporate radiology environment, is very real (particularly when the overnight service offers final reads). This concern, however, was mitigated by the ability of the remote company to provide subspecialty daytime coverage.

Of note, all radiology groups (true regardless of size), demanded a high degree of accuracy with rapid turnaround times, wanting to see their overnight provider as equaling the level of service perceived to be offered by themselves. Furthermore, overnight services were often evaluated with a highly critical eye and quality issues were typically assumed to be the fault of and rest with the overnight service.

Perhaps the most interesting finding was that these small and medium sized groups, while clearly the heaviest users of overnight reads, viewed these external groups as nothing more than just service providers—the authors assert that this position, while at first-pass understandable, is dangerously myopic.

2 Clinicians (ED)

Participants

This group consisted of ER physicians followed by hospitalists, urgent care providers, and surgeons. Emergency department and hospitalist physician participants were members of very large, established medical groups, working almost exclusively at one physical location. This group also included feedback from clinical specialists (e.g., orthopedic surgeons), largely characterized as solo practitioners or members of very small professional groups, also almost exclusively working
at a single location.

Findings

For this cohort, the perceived value of the preliminary read was straightforward and was measured by the following metrics: turnaround time, certainty, and accuracy. Turnaround time is a natural, clear measure of performance because it is an obvious gating item for their own activity—not having any kind of report upon work-up or admission results in care delays, reflecting poorly on their own professional services. This group also reported and valued the need for definitive reports, a demand that held true regardless of whether that report was generated from an external or local radiologist. Finally, this group assigned a high importance to the need for accuracy—consistency between the preliminary and final read as differences could dramatically impact therapeutic choices.

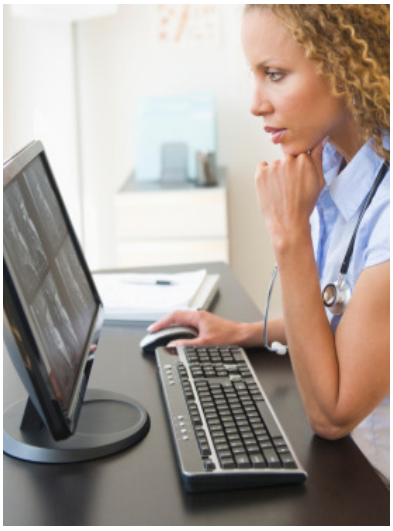
In summary, there was a clear and assigned value to the overnight preliminary read by these clinicians.

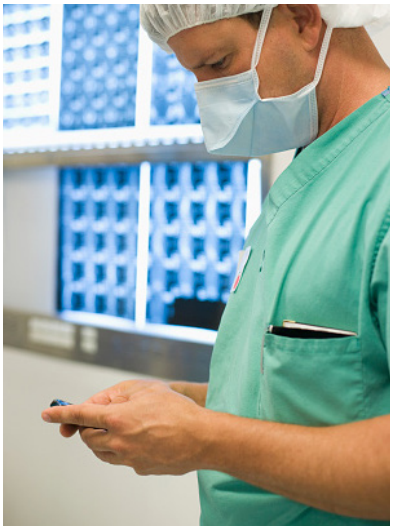
3 Hospital **Administrators**

Participants

Hosptial administrators were both physician and non-physician professionals with an experience profile ranging from leadership of small community hospitals to larger regional healthcare networks.

Geographic representation included California (both northern and southern), Texas, Washington, Minnesota, New York, Utah, and the United States Military. All participants were assured of anonymity, and no patient identifying health information was communicated or transmitted.





Findings

Radiology Professionals—Large Practice Groups

The list of metrics that private practice radiology groups will be externally measured against will only increase: these include but are not limited to enforceable and standard turnaround times, 360 reviews, costs, and communication—all against a backdrop of increasing transparency. In a 2013 article of *Radiology Business*, Keen cites an example of the decision of a Connecticut based hospital, in response to an underperforming local

Discussion

Value Remains in the Preliminary Read

To no surprise, the perceived value of the preliminary read is largely dependent upon one's point-of-view, or alignment. However, as the aim of the authors is to serve the needs of image management professionals, our discussion will focus on this perspective and how the findings above can advance their practice. For the purpose of this paper, this discussion includes:

- Start on lessons learned from ends users (clinicians)
- Turn our attention to hospital administrators
- Insight for radiology groups of different sizes.

Lessons Learned from Clinicians.

The data is clear--clinicians (ED physicians, hospitalists, etc.) still find clear value in the preliminary read and given the nature of medical practice, this is unlikely to change anytime in the foreseeable future. These physicians are, in fact, ultimately consumers of image management services and radiology groups would benefit viewing them as such.

As consumers of any service, they are predisposed to focus more on the quality and nature of the service as opposed to the actual service provider (supported by the finding that these clinicians hold the same demands and discriminate equally to both internal and teleradiology groups).

As a result of this position in the clinical supply chain, this consumer group is the most likely to categorize image management services like crude oil—a simple commodity in which if one group fails to deliver, simply switch out for another.

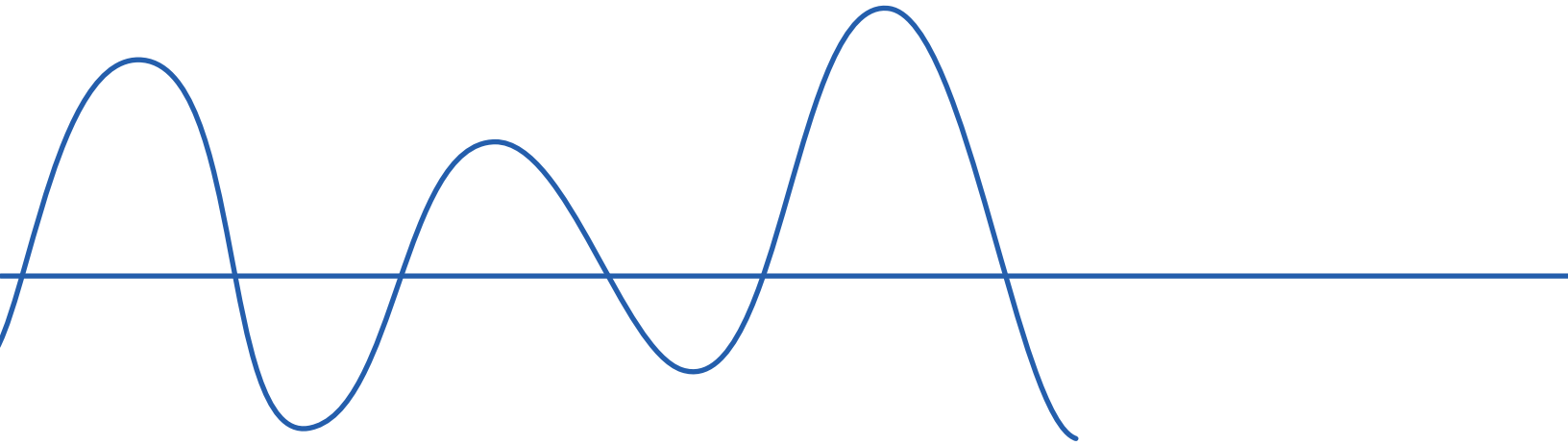
This ability to simply 'switch' is uniquely possible for radiology, where advances in technology allow, in theory, for ease of replacement. However, for the private practice radiology group, big or small, accepting this assertion is not only erroneous, but fundamentally at odds with long-term success. As elucidated in our earlier paper, a commodity has the definition of being perfectly substitutable and thus subject only to price variations. An inventory of what it means to deliver professional radiology services quickly demonstrates no two groups are equivalent in the same way that no two accountants or lawyers are the same. The insight is not that radiologists are commodities, but that radiologists are in the service industry and your 'service' attributes are, among other things, turnaround times, definitive studies, and accuracy. Looking one layer deeper, each of these service metrics are directly tied to the human capital delivering this service. In other words, if you are going to stand above the rest in the eye of these demanding consumers, it really does come down to your people. By extension, this absolutely includes those people delivering preliminary reads in the middle of the night. The question for the radiology group leadership is the following: do you see your teleradiology group as a distant service provider, or as a partner who is embedded and understands your business?

Turn our attention to hospital administrators.

If ER physicians (and other end-user clinicians) are best seen as consumers of image management services, hospital administrators should be viewed as key influencers—those that are capable of having dramatic impact on success (or failure) without directly utilizing services.

To be sure, these executives can drive awareness and possess considerable purchasing power. This power is even more concentrated today as these executives, who live in a digital age, have considerable information at their fingertips and likely have a mandate to seek the most cost-effective service provider—posing a potential threat to the established, entrenched radiology service provider.

However, the forward thinking radiology group does not see this natural lack of alignment as a threat, but as an opportunity.



In a 2015 paper from Kovac and colleagues from Bain & Company (Bought not sold: Marketing and selling to digitally empowered customers-October 2015), the authors put forth that smart firms reorient themselves upstream and those that thrive in the digital environment have smart views of their customer's behavior and provide their customers with a tailored buying process. How can this be applied to hospital administrators and preliminary reads? An innovative radiology practice will first see hospital administrators as upstream customers, not mere bystanders in a periodic contracting process. Furthermore, practice leadership will tailor their service portfolio (including the need for quality and timely overnight preliminary needs) to improve the visibility and contribution of their practice to hospital and/or network success. While this may sound formulaic and stepwise, the continued awareness and execution is what will make the difference.

As with the end-users, the question for the radiology practice is, does your teleradiology partner possess and/or share this insight?

Insight for radiology groups of different sizes.

It turns out that the perceived role of the preliminary read for radiologists themselves has ultimately little to do with metrics such as turnaround times and accuracy. In fact, in investigating the perceived value of the preliminary read from the perspective of radiology groups, either large or small, the authors assert the most critical insight stems from the fact that the majority of groups see these external providers as a mere service.

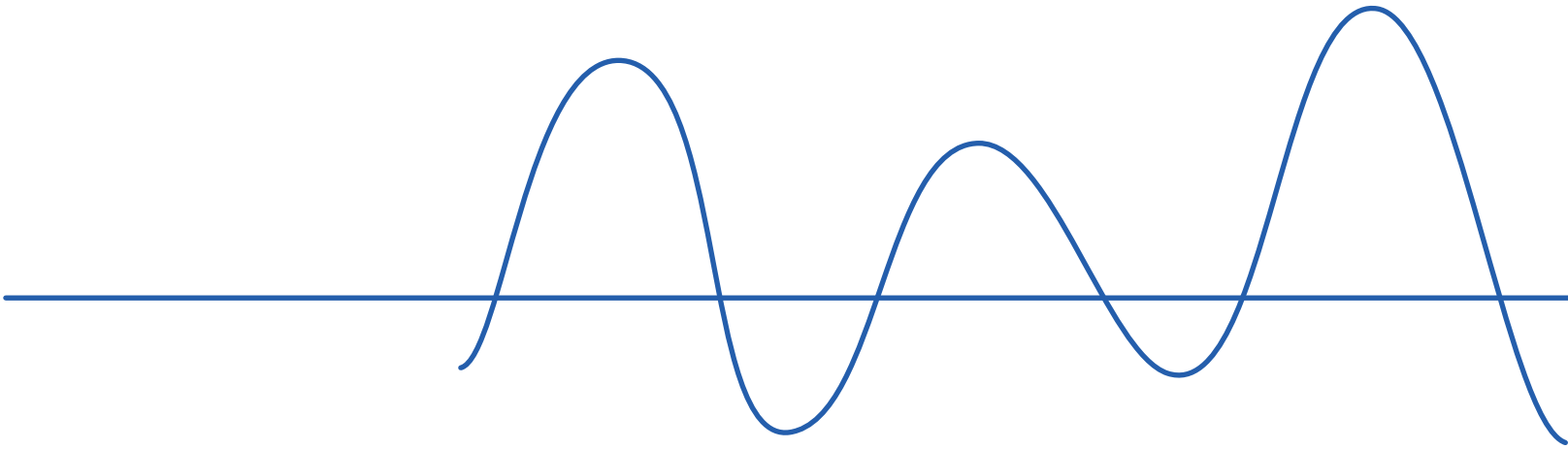
In doing so, they devalue the very service they themselves are offering and create their own alignment issues by minimizing the importance or impact these 'external' firms have on the success, or failure, of their own practice. While we concede there may be a number of factors at play that are beyond the theoretical, if radiology group leadership fundamentally sees their own teleradiology service provider as a mere commodity, it becomes difficult for other stakeholders (e.g., end-users, influencers) to behave any differently. There is an alternative—one can argue that the right teleradiology service provider, in fact, is not the substitute teacher but a valued team member and even a tool for positive differentiation.

The right teleradiology partner understands their role as a:

- Team-member and representative of their client
- Seamless and trusted service provider
- Market differentiator
- Source of 'at the ready' extra-capacity for large groups
- Loyal partner with a stake in long-term practice success

Conclusion

The preliminary, overnight read helped germinate an entire industry affected with a seemingly complicated mix of market dynamics: technology, pricing, reimbursement, and outsourcing. In reality, today's professional radiology practice strikes a chord very similar to other services trying to thrive in a digital age—are you, and your partners,



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Corporate Headquarters

13280 Evening Creek Dr. S, Suite 110 | San Diego, CA 92128
Toll-free: 855-TELERAD | Email: sales@statrad.com