

The State of Teleradiology in 2019



By [Whitney J. Palmer](#)

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[Technology](#), [Teleradiology](#), [Trends & Business](#)

Since teleradiology hit the scene nearly two decades ago, thoughts and opinions about this type of service have been a pendulum swing. Initial thoughts that it would push some providers out of practice eventually gave way to mutually-beneficial relationships.

Although the overall teleradiology market appears flat-to-shrinking, teleradiology companies have taken over call for practices that are too small to handle the expanding volume of studies, as well as those who no longer want to ask their radiologists to cover the night shift. In fact, today, teleradiology has solidified its market position with these groups, but it is vulnerable to larger practices reclaiming call within their own groups.

“Teleradiology is a saturated, mature market that is no longer growing,” says Lawrence Muroff, MD, FACR, chief executive officer and president of Imaging Consultants, Inc. “If anything, it’s shrinking somewhat because, as practices get larger, they have a greater capability of providing comprehensive

call themselves.”

Still, there have been some changes in the customer base for teleradiology and expansion in the types of technologies used to support the services. And, according to industry experts, it has all led to continued benefits for both patients and providers.

Teleradiology’s Customers: Who Are They?

Initially, rural hospitals were the most frequent consumers of teleradiology services. For many, attracting an in-house, full-time radiologist was difficult, severely limiting their abilities to provide diagnoses that could impact and direct a patient’s care in the timeliest manner. Outsourcing reads to radiologists located elsewhere made their work easier.

Simultaneously, says Michael Yuz, MD, MBA, chief executive officer of teleradiology company USARAD Holdings, Inc., imaging centers of all sizes, as well as international clients, have steadily expanded their use of these services. A significant growth in physician usage has also come from government international contracts, such as military bases, he says.

In addition, according to Arjun Kalyanpur, MD, chief executive officer and chief radiologist at Pennsylvania-based Teleradiology Solutions, larger hospitals have also increased their teleradiology utilization in recent years. The push here, he says, is the ballooning desire for more sub-specialty coverage.

“For some facilities, there’s a need for a specific coverage for a particular area of medicine or type of cancer,” he says. “Cases are becoming more complex. Fundamentally, I think, the need for more sub-specialty care spans all of radiology.”

Teleradiology’s Technologies

When it comes to modalities, Kalyanpur says, every modality for which images can be digitized and sent electronically can pair well with teleradiology. Interventional radiology, however, is the exception as the radiologist involved is always conducting the procedure on-site.

Much of the other teleradiology technological advancements center on improved workflow efficiency. Traditional PACS and RIS systems are designed for use within large institutions and healthcare environments. Instead, teleradiology requires systems that function well for multiple radiologists within multiple institutions located at multiple sites.

For example, Yuz says, teleradiology now has its own marketplace designed with blockchain technology and cryptocurrency. Much like Uber, he explains, any radiologist interested in providing teleradiology services can participate in this platform and receive immediate compensation into their digital wallet for their rendered diagnoses and submitted reports.

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“For radiologists, this is a game changer as they are allowed to provide services from anywhere and receive a financial settlement in real time,” Yuz says. “Customers and patients also see advantages because they have a larger selection of radiologists to choose from, including a bigger population of more-specialized providers.”

These connections also make it easier to transmit images and reports, including prior images, between providers and facilities.

But, the marketplace’s impact stretches beyond a wider provider base and better communication, he adds. The design also lets providers work within systems they already know, limiting the chance of mistakes caused by any operator error due to unfamiliarity with the technology.

“The marketplace is engineered to connect to all major PACS systems and allows radiologists to read from the PACS system they like best,” he says. “They are not forced into reading on a brand-new system they’re not familiar with.”

In addition, as with most other areas of radiology, artificial intelligence is starting to infiltrate teleradiology. Already, Yuz says, there’s a tool to help teleradiologists identify lung nodules. And, a similar tool that can help identify small brain leaks is also currently in the testing and development phase, Kalyanpur says.

Both see artificial intelligence as an area that will continue to grow significantly within teleradiology.

“AI is not only increasing the accuracy of reporting, but it is also working as a second pair of eyes on the images to improve the quality level of the reads,” Kalyanpur says. “Overall, artificial intelligence is set to make a big impact in the teleradiology environment because it has a lot to offer.”

Teleradiology’s Benefits

One of the biggest benefits teleradiology presents, Muroff says, is the potential for sub-specialty reads by a trained provider.

“If you can provide 24/7/365 sub-specialty coverage, the patient is the major beneficiary because the patient, then, gets his or her studies interpreted by the individual most qualified to provide that interpretation,” he says.

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Individual radiologists who choose to interpret outsourced imaging studies for a variety of personal and family reasons also benefit, he adds, because teleradiology gives them the opportunity to live where they please and set a schedule that works best for them. If they choose, these radiologists can solely work night shifts, keeping their days free for other endeavors. It also allows them to focus on reading the particular sub-specialty images with which they are most comfortable.

Radiologists who work for smaller group also gain when teleradiology services are utilized, Kalyanpur adds.

“For a group of radiologists, it’s comforting to know that there’s a time of evening when they can sign out and have their own time to get rest and get prepared for the following day,” he says. “Coverage is becoming busier and busier with greater utilization, and for radiologists who have already put in a full day’s work, covering nights can be very strenuous.”

Facilities can also enjoy cost savings through teleradiology. Hiring radiologists to work on-staff is more expensive than outsourcing reads, Yuz says. By sending images out, institutions not only save money, they're also ensuring they get a quality read with a quicker turn-around time.

Additionally, teleradiology can lead to stronger relationships between radiologists and referring providers, Kalyanpur says, particularly in the emergency room setting. Emergency room physicians tend to work the same shifts, giving teleradiologists the opportunity to get to know them.

"Teleradiologists can develop very close relationships with the emergency room staff in the hospitals they cover," he says. "As they work with the same physicians over and over again, they also develop channels of communication that are quite strong, as well."

Over time, he says, the back-and-forth process of sending images and returning a diagnosis and report becomes seamless.

Ultimately, Kalyanpur says, working as a teleradiologist gives providers an increased opportunity to better juggle all their responsibilities. Whether they're early in their career and have young children to care for or they're mid-career with elder care issues to attend to, teleradiology offers greater professional flexibility.

"Teleradiology allows providers to be productive practitioners off their craft," he says. "It allows them to keep their personal and professional roles in the life in balance. That's a big value that radiologists perceive, and its one of the main reasons why the teleradiology career is such an attractive one."

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