

Issue Stories

SPECIAL REPORT:

TeleRad or TeleBad?

by Renee DiIulio

A recent article in *JACR* is stirring controversy with its claim that teleradiology companies are contributing to the decline of radiology.

First came x-rays, and they were good. Then came digital radiology, which was also good, but brought with it challenges in use and management that led to the development of PACS. PACS, too, was a beneficial thing, increasing the efficiency and accuracy of radiology reads and reports. But it turns out PACS also had a downside, one that is just starting to be recognized now as a factor leading to the commoditization of radiology. And then came teleradiology.

Teleradiology made use of technologies, such as PACS, that had been developed for radiology, and many radiologists considered it a godsend. "It drove the group crazy to be on call all night, and teleradiology was something that was very, very attractive," said Leonard Berlin, MD, professor of radiology for Rush University in Chicago.

Teleradiology's well-publicized origins lie in a trip to Asia by US physician William G. Bradley, MD, PhD, FACR, now chair of the department of radiology at the University of California at San Diego (UCSD). While visiting China as a lecturer, Bradley received a call from a neurosurgeon dealing with a nighttime emergency case, relates Samir S. Shah, medical advisor of client services for Virtual Radiologic (vRad) in Eden Prairie, Minn. Bradley downloaded the image from the Internet and provided a quick diagnosis.

"His thought was that he was wide awake because it was the middle of the day in China. So the origin of teleradiology was based on improving patient care, having a fresh set of eyes looking at an image rather than having a tired, bleary-eyed, overwhelmed person taking call," Shah said.

And this all seemed good, but as with most innovations, there has also been a downside, one not only having an impact on the process of radiology but causing its business practices to evolve as well. There were early warning signs, but they were tempered by the temptation of a full night's sleep. However, as teleradiology companies have begun to enter a more competitive stage and target the market previously dominated by private radiology practices and groups, the debate about its advantages and disadvantages has heated up.

David C. Levin, MD, professor emeritus of radiology, and Vijay M. Rao, MD, chair in the department of radiology, both at the Thomas Jefferson University Hospital/Jefferson Medical College in Philadelphia, felt the time had come to make a statement and bring the debate to the fore. Their paper, "Outsourcing to teleradiology companies: bad for radiology, bad for radiologists," published in the *Journal of the American College of Radiology* earlier this year, laid down the gauntlet on the topic, generating significant discussion from supporters and critics.

Bad Message, Good Intentions

In their paper, Levin and Rao explain their belief that the overuse of teleradiology has sent a negative message that has led to the commoditization of the radiology profession as a whole. "Radiologists like to say that the things we do are very important to the diagnosis and treatment of patients, but then we turn around and say that's true only between 8 am and 5 pm. After 5 pm, we're perfectly content to let it go to somebody else 500 or 1,000 miles away. And I think it sends a very bad message to physicians, health policy makers, and hospital executives that radiologists really aren't that important to health care," Levin said.

It is this concern that was a primary motivation for the paper, which suggests teleradiology will harm the radiology profession and which recommends radiologists take steps today to preserve their practice. "The specialty of radiology is already somewhat beleaguered: payors are cutting our fees, and other specialties are trying to encroach on our domain," said Levin.

Berlin likens it to a perfect storm. In addition to declining reimbursements, he credits electronic imaging, PACS, nighthawk services, and a tightening radiologist job market with altering business models in the field of radiology. "With old-fashioned x-ray film, there was only one original kept in the x-ray department," Berlin recalled. This meant the radiology department was busy: radiologists not only read but also consulted, educated, learned, and even socialized as physicians came to them with questions.

With the advent of digital images and electronic transmission, the "original" reason to head down to radiology no longer existed. "PACS really started this [commoditization of radiology]. It was PACS that led to reading rooms being emptied of clinicians. It was PACS that led to clinicians no longer consulting with radiologists. And it was PACS that led radiologists to care more about read rates and reimbursement," Shah said.

Bad Behavior, Good Business

It is not PACS, however, that Levin and Rao take issue with, or that radiologists are concerned about today. It is not even the use of the technology to enable teleradiology. "The technology of teleradiology is great because it allows radiologists to log into their PACS systems from home and send images to referring physicians, but its use by teleradiology companies is a perversion of the technology," Levin said.

Levin acknowledges that not all teleradiology is bad. "Originally, teleradiology was intended to provide backup for small rural practices, and I can see, in a situation like that, where outsourcing might be reasonable," Levin said, adding that its use in the same instance for subspecialty reads is also understandable. But it is the use by large practices, where on-call responsibilities are not a significant burden, that Levin protests.

"In a group of 30, 40, or 50 radiologists, it would not be too much of a burden to ask the physicians to cover one night every 20 or 30 weeks," Levin said, noting he himself covered call as an interventional radiologist for 17 years. By outsourcing call, radiologists give away their power along with their business, and established teleradiology companies find themselves in a better position to compete in the same market as their customers.

In fact, some larger companies have stated their intentions to pursue hospital contracts, eliminating the radiology "middleman." Experts link the change in business model to a change in the nature of the companies. As teleradiology firms have gone public, their stock value and profit figures have become more important, and as the nighttime market has become saturated, they have had to look to other avenues to continue to generate positive and increasing numbers. The most obvious is the daytime radiology market; the murkier issue is who should be concerned about whom.

"The authors assume that everybody is headed in the same direction and all teleradiology companies are bad for the industry, but that is definitely not the case," said Joe Mook, managing partner in the teleradiology firm StatRad, based in Poway, Calif. Mook describes StatRad as a radiology practice with a model developed to support radiologists and provide patient care. "We are not here to take over radiology or the world or even to generate obscene profits for shareholders," Mook said.

Even some of the larger companies deny they aim to conquer all, many stating they will not compete on contracts directly with their clients. "If we engaged in predatory behavior with even one of our clients—in this environment, with this economy, and with the Internet—it would be posted within minutes, and we would be put on notice by all 2,700 of our sites," Shah said.

Shah does not deny, however, that there are teleradiology groups chasing daytime contracts that include on-site company radiologists and that these groups are negotiating directly with hospital CEOs and administrators. Ironically, many of these relationships were initiated through contracts with servicing radiology groups.

Good Incentive, Bad Pay

Those direct hospital-teleradiology relationships are a threatening option because of the financial incentive. Teleradiology firms can present cases to hospital presidents that can save \$1 to \$2 million a year, and the hospital president really has no choice but to go for the contract, Berlin says.

Teleradiology companies have advantages that enable them to produce reads for less money than on-site radiologists would charge. Teleradiology supporters suggest the cost-savings result from efficiencies incorporated into the process; Levin and Rao suggest these reflect poorer quality reads and reports.

"To make money, teleradiologists have to read lots and lots of cases. The faster you read, the more likely it is you're going to make mistakes," said Levin. Pre- and post-read areas suffer too: Levin suggests teleradiologists may not be privy to the same clinical information provided to an on-site physician, nor do they receive follow-up that serves not only to correct a report but also to educate the reading radiologists.

Teleradiologists, however, take offense to this line of thinking. Shah notes that a dedicated support staffer ensures complete clinical reports are provided with each case, but if any questions exist (due to either missing information or inconsistent findings), the teleradiologists will contact the referring physician directly.

While reading, efficiency is increased by a focused environment. "It's much more efficient when you're reading pure radiology. It's often at night, and there are no interruptions, just a steady stream of cases," Shah said. If a consult is needed, there are subspecialists and other radiologists on duty within the teleradiology firm who can help review cases.

Afterwards, the teleradiologist may not consult directly with the physician (although they can), but if the results were incorrect, Shah would expect to hear about it. "Our clients are paying for the service, so we can't afford to be wrong."

However, teleradiology efficiency could contribute to the radiologist's financial undoing. "Let's say you have a commercial payor who pays radiologists \$80 to read an MRI. Then that commercial payor finds there are nighthawk services that will read those same MRIs for \$35. They will wonder if that service is only worth \$35, why they are paying \$80, and they'll start paying \$35 to everyone," Levin said.

Good Ideas, Bad Timing

The threat is real; radiologist incomes have already dropped. "They're going to go down further. All predictions suggest another 20% to 25% decrease in incomes over the next 3 to 4 years," said Berlin. The job market has complicated matters further.

Just a few years ago, radiologists had their pick of jobs. With a shortage of radiologic expertise, young radiologists could make demands on hiring groups that included no call responsibilities, driving up the adoption of teleradiology. Now, however, the cycle has reversed, and there are more radiologists than jobs.

Levin thinks this fact can be used to radiology groups' advantage. A tighter market gives new hires less power and increases the ability of practices to make demands that can include call. However, it also means some radiologists who may have originally thought of entering private practice will instead become teleradiologists themselves.

"Young radiologists view it as an option just like they do a fellowship in pediatric radiology or vascular radiology," Shah said, noting the company sees a lot of interest from young radiologists, many with strong resumes. Levin hopes to counteract this by recommending radiologists do not work for teleradiology companies, but others acknowledge this request may be unreasonable for some. "Radiologists are looking for jobs, and those are good jobs that pay," Berlin said.

Similarly, it could be too late for radiologists to alter the direction of the evolution of the radiology practice model. The current environment, combined with the evolution that has already occurred, may mean things have gone too far to reverse. Berlin notes radiologists turned to teleradiology for the short-term gratification without considering the long-term consequences. "We were very shortsighted, and now I think the horse is out of the barn."

Shah concurs that teleradiology is here to stay, but Mook believes the paper may have some influence over radiology group business decisions. "I don't expect them to run out and stop working with teleradiology companies as a result of a single article, but they'll look at who they're partnering with and what kind of coverage they're seeking," Mook said.

Levin and Rao will be happy to see more thoughtful behavior and think that it is not too late to preserve the realm of radiologists. "I'm neither foolish nor naïve. I know some groups are going to continue to use nighthawks, but there are a number of private groups acting now to take back call and there are ways for private practices to cover night call without using a teleradiology firm," Levin said, citing consolidation and cooperative agreements as possible solutions.

Indeed, Levin and Rao would like to see radiologists take back the night and take back their profession—before the profession's responsibilities and reimbursement fall too far to reclaim. Some of their fears may sound alarmist; others actually are alarming. Their recommendations may seem unreasonable to some, completely practical to others. Radiologists will have to weigh the pros and the cons before deciding on their own whether teleradiology is telerad or telebad.