

Teleradiology Services

Advances in internet speed and reliability along with a growing acceptance of telemedicine have led to an explosion in teleradiology services. In addition to providing after hours support, remote facilities that used to rely on physical transportation of films can now enjoy the daily services of trained, subspecialized radiologists delivering reports in a matter of minutes or hours instead of days or weeks. The progressive reduction of information and political barriers continues to help countless patients worldwide thanks to rapid, accurate, remote, radiographic diagnosis.



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What is the advantage of a teleradiologist over the physical presence of a radiologist?

Most importantly, teleradiology has brought radiology diagnosis to rural areas that were previously underserved. These comparatively low volume facilities did not have sufficient volume to support a full time radiologist and therefore could only get intermittent or delayed service. With teleradiology, these locations can now receive rapid continuous radiology coverage. Regarding after-hours radiology, after a busy day at the office, it is not in the patient's best interest to have the same radiologist working another 4-14 hours delivering care. A dedicated after-hours radiologist starts the evening fresh after a day's sleep. When one hires a daytime teleradiology position, one actually hires many subspecialized radiologists. This redundancy means your remote radiologist is always "there" and can do many different things. This position can ease the burden of your remaining onsite radiologists. *However*, there are a few features of the mighty onsite radiologist that will not be replaced. There is something to be said for the ability of the onsite radiologist to walk down the hall and speak directly with the staff (six inches from their face) to maintain quality, to perform procedures, and to directly interact with the clinicians, patients, and administration.

Why has there been such a recent surge in the utilization of teleradiology?

The technology that allows x-ray images to be viewed over the internet has been around for some time but the limiting factors were acceptance of this technology, acceptance of the notion of a remote radiologist, and acceptance of releasing a part of one's radiology business to another radiology group. These barriers are all coming down. There is also a trend of radiologists coming out of practice wanting more freedom to live anywhere which reduces the ability of small, less contemporarily desirable locations to recruit new radiologists. Many of these new radiologists want to live in big cities, "fun places", or travel which is conducive to taking teleradiology positions instead of hospital jobs. This all leads to facilities potentially needing to supplement their radiology force with teleradiologists.

What is the most important technical issue regarding teleradiology?

Reliability. Without images, there is no radiology. Reliability is achieved by implementation of hardware, software, and internet redundancy along with available, trained, live technical support. The most important, non-technical issue: accurate, rapid reads.

What value added technical features should one consider when comparing teleradiology providers?

An easy to use, secure, online system that has a feature set that addresses the facility's needs. There are many novel and useful functionalities available now that provide online QA, stats, image printing, report trafficking, case followup, interesting case files, desktop sharing, differential billing, and audible alerting for new cases. Ask your vendor what you want and your vendor might even present a few useful tools you had not considered.

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Quality of services first – price last. The content of the report is number one. There is variability in the content of reports from various services. The report does not replace the telephone and the successful teleradiologist continues to preserve the doc-to-doc relationship. Regarding shift work, service is likely best preserved by teleradiology companies that do not pay their radiologists by the case, as this potentially motivates the radiologist to not do phone calls or other such non-revenue generating services. This is not an absolute, though, as most radiologists, by their nature, will perform their duties to the best of their abilities and generally have a particular pace that is not significantly adjustable by external forces. Reliability of the technology and consistency in the turn around times are also important. Vendor fees should be the least important evaluation item. Since most vendor fees are within about 10% of each other, I submit that a few bucks per case are worth the FTE generated by the facility to put out all the fires due to poor or unreliable service, the stress of increased probability of lawsuits, the stress of knowing you are voluntarily underserving your patient population, and the repair of damaged internal and external relationships as a result of choosing a bargain solution for professional services. Check your vendor's reference list of facilities doing the services you request – don't just be awed at the size of the list, actually call. Talk to the radiology techs – they will be entertainingly frank about their current situation. Also be sure to have a verbal and contractual understanding regarding competition for services. You don't want to hire a service that comes in and takes away your contract.

What is the future of teleradiology?

The crystal ball is definitive on this one. More. More cases. More types of cases. More images per case. Immediate technology should address increasing bandwidth and simplifying the process of delivering reports directly into various radiology report systems. Online patient information databases will become more comprehensive and user friendly. Now that most US practices accept the notion and methodology of teleradiology, services will grow (have grown) to include many subspecialties such as CCTA, Breast MRI, Neuroradiology, MSK, Pediatric radiology, Mammography, and Nuclear medicine. This allows the local radiologists to focus on "bread and butter" radiology and have access to their teleradiology subspecialist for some, most, or all of their subspecialty radiology. Services are now beginning to offer additional services such as online PACS, RIS, and technical support. The crystal ball is hazy regarding such subjects as off-shore radiology, stability of professional fees, and private/public companies and mergers.