With many rapid advances constantly transforming technology, businesses of all spectra are continuing to adapt, improving their quality of service and efficiency – especially those in the field of radiology. There has been a tremendous boom in the “teleradiology” movement to interpret digital exams offsite from where the actual examination was performed.

This may seem like a brilliant idea; however, if the movement is examined more deeply, it could create problems. It seems that too much teleradiology is actually hurting the field from a relationship and quality standpoint. My colleagues have developed a solution to ease the weariness of those speculating about teleradiology’s “silo mentality.” The result is a new hybrid model that combines both an inhouse and a Web-based system to deliver the best of both worlds.

In a standard model of teleradiology, the first common problem for Web-based remote imaging contracting services is the relationship-building void created by offsite readings. A new system of teleradiology takes the practice a step forward by combining both inhouse and remote imaging with a team of subspecialty radiologists.

There is a gaping hole in the radiology network if we rely solely on the remote relationship with our contracted hospital’s medical staff. We have found that a hybrid model of a full-time, inhouse radiologist or radiology practitioner’s assistant (RPA) – or both – coupled with our remote subspecialty radiologists can bring newfound results in any hospital in any location.

The in-hospital professional radiologist and/or RPA is present to build relationships and serve the medical staff. It makes a difference when the team leader is inhouse and establishes relationships with all the medical staff members. This can mean anything from a casual discussion in the doctor’s dining room to teambuilding with specific hospital centers, such as orthopedics, cardiology, and the ER. Service and efficiency are key elements of this approach, and the results of this model have been very noticeable to both our network and to our contracted hospitals.

The second common problem is that many suburban, semi-rural, and rural hospitals typically don’t have access to subspecialty radiology professionals. The technology used today to route digital exams to appropriate doctors is not focused on routing these exams to a certain subspecialist trained in that specific body part. The current theory employs a model of “whoever is available.”

We should use the technology to route the exam to a specific subspecialist in a certain field 100 percent of the time, at least during the normal business day. This will greatly improve and sustain quality. The medical staffs of smaller hospitals are very excited about having subspecialist coverage for their radiology department because it helps them in their diagnosis and treatment plans. This is particularly true in specialties such as ear/nose/throat, spine, and orthopedics.

The third issue addresses the field of radiology and its slow use of physician extenders; other fields in medicine have integrated physician extenders in all aspects of clinical and patient care.

These physician extenders are specifically trained in the field of radiology during clerkships, have graduated from an RPA school, and must be a registered technologist. RPAs are commonly used for gastrointestinal procedures, and the preliminary internal interpretation of plain radiography. This allows inhouse radiologists to focus on and interpret more specialized examinations, such as CT, MRI, and PET.

Our RPAs are also deployed to more rural hospitals and clinics where it would be too expensive for a radiologist to travel to perform these minor procedures. This is another example of our onsite/offsite model. RPAs have been proven to be very valuable to the radiologist, hospital, and the quality and efficiency of radiological healthcare.

The fourth issue addressed with the hybrid model is the turnaround time (TAT) – the time it takes to interpret an exam from the point of receiving to reporting. The faster a clinician can receive a report, the faster a patient gets treated and, in many cases, the shorter the hospital stay. Our focus in this realm has made us a leader in TAT statistics. We simply employ 90-percent voice recognition technology. Examinations are interpreted with specific software to automatically type what is said on the screen, so that when a radiologist is done with their report, it is instantaneously available to the clinician. Typical TAT is 24 hours or more, but ours have been consistently on average below the six-hour mark.

The final issue deals with the universal ordeal of finances. There has been a divergent progression of radiologists’ salaries, cost of malpractice, management physician costs, and benefits for radiologists versus payer reimbursements. A shortage of radiologists has prompted a demand for specialists in the field, which has caused salaries to skyrocket. As a result, insurance reimbursements have been cut almost every year. Radiologists’ salaries plus benefits are a fixed cost. Within the onsite/offsite model, there is direct cost savings by reducing the number of onsite radiologists, or limiting them in number and shifting studies offsite.

The offsite reading cost is just a very competitive “fee-per-study” model. This saves the hospital from spending money to manage their radiologists, pay for malpractice, and provide health benefits. These are expenses that are handled and managed by us. The three keys to cost savings are: reducing the number of radiologists onsite, in some cases placing an RPA in the hospital to handle fluoroscopy procedures, paying a reduced fee per study schedule, and not having to pay for malpractice, CME, health benefits, and other miscellaneous benefits in the loaded cost of radiologists.

In conclusion, using all five of these processes is a difficult task, and it has taken us three years to work the bugs out. Many radiology services employ one or two of these principles, but rarely all five. Hospitals and radiologists are in need of a system-wide approach to reap the benefits of our advanced technology.

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