The vision of a Brazilian teleradiologist: five-year experience, prospects and information heterogeneity

A visão de um médico telerradiologista no Brasil: experiência de cinco anos, perspectivas e heterogeneidade de informação

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Mr. Editor,

One of my main motivations to join the teleradiology practice was getting the chance to observe the current radiology landscape: the typical teleradiology, reading scans from my home office at two in the morning, in a strenuous routine for at least three uninterrupted years. All the while, I was trying to connect what I saw from small services, with other larger and more developed services, drawing a parallel and trying to find out the course it might take.

The perspective on the variability in the image acquisition practice can be useful and it may raise some dialogue on the subject within the radiology community, establishing protocol guidelines and minimum quality standards[1].

Some variables should be taken into consideration[2]:

– images output link in hospitals and clinics;

– training in the utilization of visualization softwares (Osirix, Medview, Pixeon, Epeople, and others);

– onsite medical staff prepared to manage possible adverse reactions to contrast media;

– technical and biomedical staff qualified in radiology and imaging diagnosis;

– preparation of medical reports, mechanisms of security, confidentiality and result delivery.

Brazilian radiologists are aware of the variations from hospital to hospital in image digitizing, old equipment sometimes mixed with latest generation equipment, as well as protocols and diagnostic algorithms and on how such heterogeneity affects the radiological practice.

The Federal Council of Medicine Resolution No. 1890/2009 attempts at standardizing matters in Brazilian radiology, but there are large gaps such as the impossibility of supervising the activities of radiology services, lack of regulations regarding fee values and also the question of shifts. Furthermore, there are other lingering doubts for example, on whether there is a limit on the yearly number of reports per radiologist, and on the number of continuous working hours the radiologist can spend on remote reporting activities.

The utilization and combination of imaging services, plus the questionable images quality and lack of electronic medical records demonstrate the difficulties in obtaining data that may be essential for final diagnosis. Seeing the evidences of such variability reflected in the scans coming into my workstation was an eyes-opener for the necessity of developing protocols on all ends, from image acquisition, images forwarding and reporting to signature on such reports and results delivery.

Witnessing the utilization of emergency imaging and extrapolating that to the wide range of available health services, it will not be a surprise if we end up with a healthcare landscape where the per capita spending may double or triple, without any actual improvement in healthcare.

There is a tendency towards thinking that our own service does things in the best way, but it is clear that it cannot be true. This is a field where we can learn from each other. The proposal is to take advantage of the electronic networks to facilitate the exchange of information between teleradiology services about what works well and what does not[1].

For example, while some hospitals are advanced users of PACS, there is a majority of latecomers, where facilities with previous exams are practically inaccessible, or which had previous images archived in unavailable backup storages, or for being available only on films or printing or for being simply lost.

As a remote teleradiologist, I may have underestimated the degree to which an onsite radiologist has access to patients' health information. It is clear that there is a necessity to talk to technologists and biomedical physicians, the assisting physician and review final reports, particularly those originating from different institutions where the access to information is more difficult. The development of softwares for images exchange is at a quite mature stage, however the integration with other hospital systems and electronic records has a lot to be improved on.

Comparative studies involving health services in order to evaluate the effects of heterogeneity are essential. The true hazard lies in ignoring such matter. Most of us intuitively feel that the variability in the practice is real, with all probability of detecting approach errors. There are great opportunities to intervene in the way we practice teleradiology. If we do not do that ourselves, regulators and payors will start doing that for us, and we will not be happy with the results.

The use of health indicators provides potential benefits for radiology at various levels. The investigation on why the utilization standards vary from one hospital to another will help us to respond in a more intelligent manner to the initiatives intended to reduce the utilization of unnecessary imaging studies.

The investigation on the variation of digitalizing protocols has obvious implications for the quality of health care, with maximization of the diagnostic performance and minimization of radiation exposure for our patients. The investigation on the utilization of techniques and the use of electronic

medical records would be useful in the creation of references for our own operations and to compare them with those from our peers.

Many hospitals are using teleradiology because there are perceived advantages – particularly economic advantages –, in such outsourcing. But the advantages also include freeing radiologists from calls in the middle of the night or on the weekends, also allowing smaller groups to access subspecialties, coverage in high demand seasons or vacations, or providing coverage to hospitals in underserved areas[3].

The current concept is a real question mark for a great part of the radiology community, as it generates doubts for colleagues from other specialties, particularly in emergency departments, leading to doubts on the value that radiologists can add to their institutions and on what they can bring to the organization.

The certification of the radiologist and the qualification as a teleradiologist must be delimited and regulated. In reality, the teleradiology service tends to expand the market towards previously non commercial areas, leading to decrease in medical fees, or to cases such as that of Dr. Reddy Rajashakher, founder of the teleradiology service Reddy Solutions (RSI) who was convicted and sentenced to four years and six months in jail for health fraud, after a two-week long trial in which he faced 29 fraud charges related to "ghosting activities", or for signing radiology reports without actually seeing the images[4].

I see this not only as a problem affecting the quality of health care, but also our performance in the medium and long terms. As we enter the era of accountable care organizations, radiologists are going to have to assert their leadership. They should jointly act in nonclinical areas, such as that of information technology, to avoid marginalization and the predominance of a commercial view of their knowledge; and that has to be done now in Brazil, before it is too late, since teleradiology is a one-way path on which one travels with ever increasing speed[2].

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