

Volume 8 - Issue 3, 2008 - Cover Story: Managing Imaging Education of the Future

Teleradiology as an Educational Tool: Collaboration Essential to Promote Learning

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Teleradiology, a tool for remote work in radiology, is now recognised as a way of adding resources to a specialty in need. Teleradiology providers are mostly looked on as a remote anonymous “black box” that may live up to the contractual standards but is at the same time considered to be “cherry picking” the fast and easy cases, leaving all the heavy obligations to traditional radiology departments. But the service has been welcomed, since it covers an urgent resource need.

Collaboration Essential to Promote Learning

An even greater function of teleradiology is to provide subspecialised knowledge to small and medium sized hospitals unequipped to cover certain subspecialties in-house. Today's radiologists have a difficult task with the increased number of new modalities and the huge amount of detailed information on anatomy, pathology, function and metabolism that is now increasingly available. If radiology is to survive as a specialty, we need to know more than the referring consultants, otherwise they will take over radiology interpretation. This fact increases the need for subspecialisation even more within very narrow parameters.

Knowledge-Sharing Network

One use for teleradiology is to connect a number of hospitals into a knowledge-sharing network. With the large volumes a teleradiology provider can obtain, many different subspecialised readings can be structured to cover every need. A large teleradiology provider has a number of different client hospitals in different countries, of different sizes and with different case mixes. The clients range from small private radiology sites to large tertiary care and university hospitals. Exam protocols differ across hospitals. The reporting culture differs from one country to another, from one region to another and even between neighbouring hospitals. According to the idiosyncrasy of the hospital, radiologists may report for specialists as well as for primary care physicians.

How Teleradiology Fits the Bill for Education

These factors together form a perfect scenario for radiology education. Learning radiology is to a large extent a matter of volume training. You need to see a large number of normal and “almost normal” exams to calibrate your mind to the detection of abnormalities. Then you have to see a large number of different pathologies. In small or mid-sized hospitals, it may be difficult to meet both the quota of normal exams and pathologies. In a teleradiology setting, being a regional network or an established teleradiology provider, the number of cases per day can easily reach 500 – 1,000, giving almost unlimited volumes to read. They range from simple routine exams to very complex consultation cases, often with a large variety of pathologies. This mix of normal and abnormal in large numbers is a very suitable school for young radiologists.

For a young radiologist in training, it is essential to understand that there isn't any one correct way of performing certain exams. Different routines can be equally valuable from a diagnostic point of view and local traditions and needs often play an important role when elaborating a protocol. Seeing different exam protocols makes you reflect on the protocol and its pros and cons, leading to a better understanding of radiology.

The information that a specialist needs to obtain from a radiology report is quite different from that of a general practitioner. While the specialist wants to know details of a lesion, its characteristics, relations with other organs, vascular supply, etc, the general practitioner needs to find out the reason for the patient's symptoms and to direct possible further investigations. He/she is more confused than helped by a very detailed report. In the teleradiology scenario it is very probable that you find referrals from all kinds of physicians which helps educate the young radiologist in the difficult skill of making good and differentiated reports, provided care is taken to elaborate on the reporting format.

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