The Future Role of Radiology in Healthcare

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Abstract

In the course of recent decades, radiology has experienced significant change mainly identifying imaging technology, software and changes in the structure of healthcare service. Here we talk about the technological advancements that have propelled radiology to new heights. These advancements have also prompted radiologists to take on more a larger role as a means to reinvent themselves in the patient care process.

Future of Radiology

Secondary Education and Sub-Specialization

To provide patients with best results and the utmost care, radiologists have been encouraged to pursue secondary and specialized degree in education. This is aimed to contribute sufficiently to the care of the patients, while at the same time, creating a greater collaboration with primary care physicians. Furthering their education in specialties of physiology and cell functions allows radiologists to study disease-related cases. By developing these skills, radiologists can utilize new approaches to evaluate clinical questions in the most effective way. This would help ensure that radiologists can respond to the multiple interactions of patient care. From all this, it helps build a more cohesive team amongst all involved in the care and treatment of patients.

Technology

While there will always be a chase to minimize radiation dosage in imaging, the big changes being forecasted in radiology involve the software used within each modality. According to imaging manufacturers GE and Philips, new software in CT technology will be able to filter out and red flag suspicious tissues and scarring found during a routine exam. Another technological advancement is the GE Health Cloud. With this new platform clinicians will e able to monitor workflow, volume, velocity, and an array in healthcare data. The GE Cloud will be able to connect imaging machines worldwide. These new developments will certainly aid in the speed of diagnosis. This in turn will cut down on the frequencies and repeat exams patients currently face.

CAD & Teleradiology

The future of image processing and CAD in diagnostic radiology is on the rise, with significant results reported from various studies in chest radiography and mammography. Computer-aided diagnosis (CAD) are mainly systems which assist doctors in the interpretation of medical images. The main goal of CAD is to improve the detection of disease by decreasing the false negative rate from oversights that can be made by radiologists. Teleradiology is the ability to obtain images remotely from a different location and view them for diagnostic or consultative purposes. This form of interpretation has become commonplace for many sites and hospitals as it has been received positively and in general, has become a valuable instrument for improvement for imaging services from radiology.

Summary

Radiology is an ever-changing world, where there’s a constant evolution of the technology involved within each modality. Radiologists are a key component in this domain and their future role in healthcare is being brought some attention. Important advancements in radiology involve (computer-aided diagnosis) CAD and the advent of teleradiology services. In addition, there has been an encouragement for radiologists to clinically sub-specialize in disease-related specialties. And there must also be more interaction among patients, primary care physicians and radiologists to provide a comprehensive diagnostic & consultative service to help put an emphasis in the radiologist’s role in the patient’s experience.

Radiologists may have to make changes in their outlook and add on to their arsenal of training to adjust to the advancements in radiology. Radiologists need to adjust to evolving technology, restore contact with the patient to take on a more prominent role in the diagnostic process, in order to bring more value to the chain of healthcare. These future developments are aimed at helping to serve & benefit the hospital, physicians & their service to the patient.

History of Radiology

Since the discovery of x-rays in 1895, much has occurred in the advancement of medicinal imaging. The initial 50 years of radiology exams included a patient holding a glass cassette for up to 10 minutes while a radiologist pointed the x-rays to the body. Presently, this procedure takes milliseconds and has higher quality and much lower radiation levels. In the 60’s we saw an explosion in imaging advancement, with modalities like CT, sonography, and mammography becoming more and more widespread. With more demand for medical imaging also came a demand for more education for those aspiring to enter the field. Now with the turn of the millennium, we are seeing changes in the field and the advancements yet to come.

References


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