

Errors or Discrepancies in Radiology Reports

In diagnostic radiology every radiologist worries about over or under reporting a scan due to its clinical implication on patient's management as well as due to its medico-legal aspect. According to Robinson, Radiology's Achilles heel is "error and variation in the interpretation of the Roentgen image".¹ An error discrepancy (as used by Royal College of Radiology) in the interpretation of a radiograph, including misdiagnosis or failure to diagnose, is an example of a general type of claim in radiology. However, failure to diagnose (includes both oversight or misinterpretation of an abnormality) is the most common reason that have led to medical malpractice lawsuits. According to published results, incidence of daily real-time errors in radiology is about 3-5% while the retrospective error rate is approximately 30%. In emergency department the most common diagnostic error is failure to diagnose fractures in approximately 41%-80%.² In obstetrical sonography, missing a congenital fetal abnormality carries high medico-legal risk and radiologist bears the major responsibility whether images are acquired by a technologist or by the radiologist. Solitary pulmonary nodules <16 mm size have a reported incidence of missed diagnosis in 19% of chest radiographs while for screening mammography misdiagnosis of breast cancer has been reported in 4-30% cases.³

The errors or discrepancy in radiology reporting can be classified as cognitive and system errors. Cognitive errors are caused by problems of visual perception like suboptimal scan quality, inability to register an abnormality or interpret it. System errors are caused by healthcare delivery system like errors resulting in failed communication of an important finding to the primary physician. Furthermore, certain system factors like lack of tranquility, improper illumination in reporting area and prolong duty hours also have synergistic effect on cognitive errors.⁴ However contribution of cognitive factors towards errors in radiology reporting is about 75%.⁴

To address the issue of error or discrepancy a coherent strategy is required. First step is to do audit in radiology department to assess the gravity of the error rates. It is important to include continuous training / education sessions and inclusion of diagnostic reasoning in the basic radiology training programs. Next step is to perform a root cause analysis and define strategies to utilize available resources to address contributory factors towards systemic and cognitive errors.

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Maseeh uz Zman,¹ Nosheen Fatima,²

¹ *Department of Radiology, Aga Khan University Hospital (AKUH), Karachi, Pakistan*

² *Department of Nuclear Medicine, Dr Ziauddin Hospital, Karachi, Pakistan*