

IMAGE INTERPRETATION DISCREPANCY RATES MEASURED BY EXTERNAL PEER REVIEW

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AUTHORS: CHRISTOPHER R. B. MERRITT, MD, FACR; EVELYN BARAM-CLOTHIER, Ph.G; JD

PURPOSE:

Determination of the interpretation error rates of practicing radiologists by expert external peer review of randomly selected examinations.

MATERIALS AND METHODS:

Reviews of more than 12, 600 interpretations of 42 radiologists in 5 group practices in different geographic regions were performed by The American Medical Foundation for Peer Review and Education between 2002 and 2008. For each radiologist 200 to 300 randomly selected cases were reviewed by a panel of experienced academic radiologists. Interpretation discrepancies were classified as follows: 0 – minor incidental finding; 1- miss; diagnosis not expected by a general radiologist; 2- miss; subtle finding; no impact on care; 3- miss of apparent finding; 4- gross error; 5- over diagnosis.

RESULTS:

The overall significant (class 3 and 4) error rate for all radiologists was 3.5%, with overall error rates for individual radiologists from less than 1% to greater than 7%. Lowest error rates were found for ultrasound and general radiographic examinations and highest for body imaging and neuroradiology exams. Overcalls were noted in 1 to 2% of reports. Among the departments surveyed, overall error rates ranges from 2.5% to 4.21%.

SIGNIFICANCE AND CONCLUSIONS:

Our results agree with previous studies of discrepancy rates measured by external review with overall significant interpretation errors in 3 to 4% of studies. Of interest is the finding that these values are up to 10 times higher than those reported by internal peer review using the ACR Radpeer process, suggesting external review as a more objective process for assessment of physician performance.

American Medical Foundation peer reviews determined interpretation errors of 3 to 4%. These findings are ten times higher than reported using the ACR Radpeer process, suggesting external review as a more objective process for assessment of physician performance.