TREO
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An Analytical Investigation of Medical Personnel's Rating Competency

A case of radiographers' assessment of imaging scans in Israel

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The power of analytics have transformed healthcare into a more evidence-based, information-driven domain. The effort to increase quality of care could be further by the use of medical test classification and management. By examining a case regarding imaging tests from a privately-own medical group in Israel, we aim to assess, and potentially improve, the overall performance in interpreting test results using analytics.

Currently, radiographers are tasked with conducting the tests without the presence of the radiologists, and subsequently, have to determine the test urgency based on their experience and training, as evident in several recent research (Kilburn, Iddles, and Carrington 2018). The radiographers have become the first line of abnormality detection, and in turn reporting urgent cases to the radiologist for further and immediate assessment. The physicians rely on the accuracy of the radiographers' triages to deliver timely care.

To that end, a Radiological Information Systems is implemented to track of the assessment of the radiographer and the final assessment of the radiologists. To ensure the process is robust and is not susceptible to errors, there is a need to investigate the efficacy of the radiographers' performance. Using this as the inception point to our research inquiries, we formulate these preliminary research questions:

- Is there a statistically significant difference between radiographers' and radiologists' ratings?
- Which factors affect the radiographers' performance in classifying imaging tests?

Our final goal is to create an analytic-based methodology that could be used to assess the efficacy and performance of the interaction between two medical entities: first-line medical personnel who administer the tests and the professional physicians who verify the tests. These findings will help uncover gaps in the process and enable improvements of the process.

References

Kilburn, A., Iddles, S. I., & Carrington, B. M. (2018). Radiographer screening for incidental pulmonary emboli on routine contrast-enhanced computerised tomography scans at a cancer centre. Clinical radiology, 73(2), 219-e1.