

#RSNA14: Improved Turnaround Time with Subspecialty Reporting



Introduction of subspecialised radiology reporting led to a 15 percent improvement in report turnaround time in one Swiss hospital, according to a study presented by Thomas Boehm, MD, at the Radiological Society of North America (RSNA) annual meeting in Chicago.

Short turnaround times (TAT) of radiology reports are essential for optimising patient workflow and the bottom line of a hospital. Radiology reporting by subspecialties is intended to increase the quality of radiology reports, but is not routinely performed in Europe. This study, at Kantonsspital, Switzerland, evaluated the impact of the introduction of subspecialised radiology on total turnaround time (tTAT) of radiology reports, compared to the conventional modality-based reporting approach.

The total turnaround time was defined as the time from confirmation of an exam until its approval. Turnaround times were extracted and calculated from the Radiology Information System (RIS) by a self-developed calculation tool within the Software RadCentre Analyzer (Transact GmbH, Hamburg, Germany). Subspecialised radiology (musculoskeletal, cardiac and thoracic, abdominal, women's imaging including mammography, paediatric, neurological imaging and interventional radiology) was introduced on 1 January 2014. Every radiologic report of a subspecialised senior consultant that was approved was counted. The average tTAT over all radiologic exams and separately for the main modalities (CT, MRI, x-ray) were compared over a period of 3 months, prior to (October-December 2013; modality based reporting), and after introduction of subspecialised reporting (January-March 2014).

The average tTAT of all radiologic exams of subspecialised senior consultants was 10:35:44 (hh:mm:ss) from January till March 2014, compared to 12:27:54 from October till December 2013. The decrease of tTAT by an average of 1:52:10 (-15 percent) after introduction of subspecialised radiology was statistically significant ($p < 0.001$). Furthermore a statistically significant reduction of tTAT was evaluated for reports of CT by 1:34:40 (-23.5 percent, $p < 0.01$) and x-ray exams from 13:31:50 average prior to 11:31:59 afterwards (-14.8 percent, $p < 0.001$), while for reports of MRI exams the difference in tTAT was not significant, reducing from an average of 12:53:46 to 12:29:14, a reduction of 24:32 (-3.2 percent, $p = 0.37$).

The percentage of reports approved within 24 hours increased from 86.1 percent to 90.4 percent for all exams.

The reduction in tTAT was not due to less workload or more radiologists, but due to better performance per radiologist, according to their analysis.

"Introduction of subspecialised radiology is an effective method to reduce the turnaround time of radiologic reports for the majority of modalities", said Boehm. They plan to follow up for a longer period to assess the long-term effectiveness of subspecialised reporting, develop indicators to objectively measure report quality, and consider standardised reporting.

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