

Radiology Challenge

“How can in-depth analysis of Turn-Around-Times improve department performance?”

- Optimization of exam distribution and staff workload
- Monitoring live T-A-Ts to ensure urgent exams are prioritized
- Expedite patient treatment plans
- Decrease length of stay in ED
- Increase throughput and billing

Assessing DI Turn-Around-Times with Integrated Data Analytics

Utilizing data obtained from a Community Hospital, we assessed the Turn-Around-Times (T-A-T) for In-Patient, Out-Patient and ED patients. Using Biologics' DImax. We chose to specifically look at the T-A-Ts between the following steps in the radiology workflow; “Exam sent to PACS” to “Report Finalized”. Analysis of T-A-Ts by Modality, Clinical Specialty, Physician, Patient Class, Shift and ED Imaging to give an in-depth view across all Medical Imaging.



* For purpose of this Case study a 24 hour reporting time was observed*

* Analysis based on a three-week period and approximately 15,000 exams.*

Using Analytics to Uncover Value in Medical Imaging

For general radiology across all modalities, reading and report finalization occurred on average between 1hrs 30 mins to 5 hrs 54 mins. The exceptions were, MRI which were measured to be 23hrs 36 mins, Mammography at 22hrs 10mins, and Bone Density at 29hrs 49 mins. Analysis by Exam Procedure determined that the longest turn-around-times were for Multi-site Bone Density, Mammography Bilateral Screening and CT Chest without Contrast. Out-Patient exams averaged a report turnaround of 3hrs 21mins while ED Patients with a T-A-T of 1hr 24 mins were comparable to In-Patients at 1 hrs 7 mins.

Analysis of a cross-section of Radiologists reading a similar range of multimodality exams, T-A-Ts ranged between an average report time of 7hrs 29mins to a longer 17hrs 49 mins. It was noted that this radiologist with the longer T-A-T had a larger component of CT studies than most assigned to them. This had the effect of extending the reading time for all modality exams assigned. Analysis of T-A-T by shift showed only slightly longer report times on weekends than weekdays, despite a significant decrease in the number of exams performed.

By determining T-A-Ts from different operational and performance perspectives, it is possible to drive Radiology efficiencies, value and throughput to improve patient care

