

Purpose: Since the 2001 IOM Report Crossing the Quality Chasm: A New Health System for the 21st Century, the need to provide quality metrics in health care has increased. Quality metrics have yet to be defined for the field of radiation oncology. This study represents one institutes initial efforts defining and measuring quality metrics using our electronic medical record and verify system(EMR) as a primary data collection tool. This effort began by selecting meaningful quality metrics rooted in the IOM definition of quality (safe, timely, efficient, effective, equitable and patient-centered care) that were also measurable targets based on current data input and workflow.

Methods: Elekta MOSAIQ 2.30.04D1 was used to generate reports on the number of Special Physics Consults(SPC) charged as a surrogate for treatment complexity, daily patient time in department(DTP) as a measure of efficiency and timeliness, and time from CT-simulation to first LINAC appointment(STL). The number of IMRT QAs delivered in the department was also analyzed to assess complexity.

Results: Although initial MOSAIQ reports were easily generated, the data needed to be assessed and adjusted for outliers. Patients with delays outside of radiation oncology such as chemotherapy or surgery were excluded from STL data. We found an average STL of six days for all CT-simulated patients and an average DTP of 52 minutes total time, with 23 minutes in the LINAC vault. Annually, 7.3% of all patient require additional physics support indicated by SPC.

Conclusions: Utilizing our EMR, an entire year's worth of useful data characterizing our clinical experience was analyzed in less than one day. Having baseline quality metrics is necessary to improve patient care. Future plans include dissecting this data into more specific categories such as IMRT DTP, workflow timing following CT-simulation, beam-on hours, chart review outcomes, and dosimetric quality indicators.