**Optimizing Procedure Practice Access: A Neurology Example**

**Authors:** Christopher Tommaso, M.S.; James Watson, M.D.

**Background:** Procedural practices are significant revenue generators for many hospitals and clinics. Operating these practices efficiently to maximize capacity is critical not only for meeting patient needs, but also for driving positive financial outcomes. Patient demand for Neurology diagnostic procedures at the Mayo Clinic in Rochester has been growing significantly over the last several years. Many of these practices now have demand that is greater than their available capacity. This demand-capacity imbalance creates access issues for patients, delays care, and often causes patients to frequently call for openings due to cancellations. This project looked at increasing capacity for the Electromyography (EMG) Lab, Electroencephalogram (EEG) Lab, Epilepsy Monitoring Units (EMU), Autonomic Lab, and Movement Disorders Lab (MDL) practices.

**Objective:** Increase the schedulable capacity for the Neurology procedural practices and create plans for future capacity increases. Consider technologist and provider staffing models to increase efficiency and maximize procedure room utilization.

**Planning/Research Methods:** Over a period of six months, a multidisciplinary team was formed which included the supervisors and medical directors for all procedural practices. The team agreed upon a standardized template for compiling data, defining metrics, and detailing capacity improvement plans. Baseline data was gathered on the space utilization, existing capacity, calendar availability, and historical growth. These metrics were used to estimate potential future growth. The desired future capacity was then set to match the future growth with a 92% calendar fill rate. The team then used the baseline utilization data to understand opportunities to increase capacity. Staffing (technologist and provider), equipment, and space restrictions were reviewed to identify limits to growth. Capacity improvement opportunities that did not require additional resources were implemented immediately. Plans were defined for capacity improvements that required additional resources.

**Interventions Implemented and Results:**
- **EMG Lab** – implemented a standardized calendar that set the number of openings based on the number of providers in the lab. Schedulable capacity was increased by 3% without added resources.
- **Pediatric EMU** – Increased schedulable capacity by 20% by shifting an underutilized Nurse Practitioner resource from the clinic to the EMU two half days per week.
- **Adult EMU** – Increased schedulable capacity by 17% by converting unfilled short term monitoring slots to standard admission slots.
- **Movement Lab** – Increased schedulable capacity by 12% by prioritizing coverage of the lab practice over other clinical assignments.

The impact of the immediate improvements implemented in 2018 increased revenue by 2% with minimal increases in expenses of less than 0.5%. Detailed capacity improvement plans were also created for all practices to document resources needed and increments of capacity available to meet the projected demand for the next 5 years. Implementing the defined capacity improvement opportunities will realize additional 20% increase in revenue per year by 2022 with a 10% increase in annual expenses.

**Contact:** Christopher Tommaso, M.S., Operations Manager, Mayo Clinic, Tommaso.chris@mayo.edu