Process Optimization in a Neurology Clinic

Improving Appointment and Scheduling Patient Flow

ABSTRACT

An academic Cognitive Neurology Clinic engaged Himformatics to address challenges in patient-oriented processes, including appointment scheduling and the associated impact on patient flow. Leveraging Lean Six Sigma methodology for improvement, Himformatics developed a new scheduling model which made a significant impact within 4-6 weeks. Key results included:

- Reduction in scheduling lag time from approximately 180 days to 36 days (see Figure 1)
- Boost in Call Center staff satisfaction
- Increase in patient satisfaction. Key results included a ~5% increase in standard access scores and ~10% increase in "ease of scheduling appointments", "ease of getting clinic on phone" and "ability to get desired appointment"
- Decrease in administrative time for clinic staff to own the scheduling process
- Integration of research and clinical scheduling

BACKGROUND

The Cognitive Neurology Clinic is part of a larger institute dedicated to neurological health and well-being. The clinic offers services and tests to diagnose for cognitive impairments such as Alzheimer's, Dementia, ALS, and more. Treatments, support groups, and medications are prescribed as appropriate.   The entire care team is comprised of nurse practitioners, social workers, neurologists, psychometricians, research coordinators and RNs. The extensive clinical research conducted at the Cognitive Clinic is funded by various grants totaling over $25M. The excellent patient care and ground breaking research has earned the Cognitive Clinic a reputation as a premier provider of services to address declines in cognitive functionality.

Himformatics had previously been engaged with the Cognitive Clinic strictly in an IT capacity to enhance clinical workflows in their Electronic Health Record (EHR). As that project progressed, it highlighted a significant opportunity to address fundamental operational processes. The Himformatics Team was enlisted to assess and optimize these functions. The project approach followed these phases:

- Assess the current environment, document current state processes, determine pain points and opportunities
- Engage the front-line care team by developing a Core Team structure with consistent meeting schedule to review results, determine priorities, set goals, and establish accountability
- Develop metrics for monitoring improvement and areas needing continued assistance
- Problem solve by collaboratively developing and implementing changes
- Promote a culture of continuous improvement by analyzing metrics, monitoring changes and recommending actions

THE CLIENT'S CHALLENGE

A thorough review of relevant data, interviews, and observations revealed the following as major areas of opportunity related to Scheduling and Patient Flow:

- **New Patient Scheduling:** After identifying and analyzing baseline data, the team determined that new patients were waiting approximately six months for an appointment. This created customer dissatisfaction and various "phone-tag" scenarios to handle patient questions.
- **Resource Utilization:** The clinic had not been able to establish a refined method to track the use of clinic rooms, psychometricians, and neuro psychological testing equipment. This disrupted patient flow, caused frustration amongst the care team, and prevented the clinic from effectively staggering resource schedules.
- **Research and Clinic Integration:** All research patients were scheduled via an Outlook calendar that lacked integration with the application used to schedule clinic patients. This created various manual workarounds and contributed to the aforementioned difficulty in tracking resource utilization.

THE SOLUTION

New Patient Scheduling

After Himformatics reviewed new patient scheduling data such as "initial patient call to appointment lag time," patient satisfaction scores, and "new to established patient" visit ratios, the Core Team decided to make this the priority for optimization. The goal was to improve the patient experience by improving metrics related to the aforementioned pain points which would result in higher patient satisfaction and increased productivity and revenue for the clinic.

The immediate need identified was to leverage the centralized Call Center for the clinics, which handled incoming scheduling calls, with the exception of new patients for the Cognitive clinic. The Cognitive clinic required that all new patients complete and mail back a 25 page packet, and wait for it to be reviewed by clinic staff prior to scheduling. This was a process that created significant scheduling delays and extra work for patients and staff. Additionally, the final scheduling step was owned by a single clinic Medical Secretary, isolated from the Call Center. Himformatics worked with the physician champion to remove the pre-requisite of packet completion, and instead empowered the Call Center with questions for the patient so they could be triaged and scheduled appropriately during their call.

Resource Utilization

The next priority Himformatics and the Core Team addressed was the tracking of resource utilization in the clinic. After moving to a new building midway through the project, concerns emerged that the rooms allocated for the Cognitive Clinic felt over utilized at times and under-utilized at others. The same held true for many of the psychometricians who conducted neurological tests for both the clinic and research patients. Himformatics created a resource-planning tool compiled with data to illustrate when resources were the most and least constrained. The project team developed recommendations for staggering physician and nurse practitioner schedules and the use of shared non-exam room space to more evenly allocate room use. This reduced the strain on clinic personnel and created improvements in patient flow. Additionally, the resource-planning tool helped inform decisions about continued resource use as additional patient populations were added.

Research and Clinic Integration

The next priority was the various issues caused by the lack of integration between scheduling systems for clinic and research patients. The Himformatics team observed workflows to understand the barriers to research and clinic patients being scheduled in the same system, and learned that the required resources for research visits was significantly more complex and unpredictable than clinic patients, complicating the scheduling process. The team worked with research stakeholders to establish a process to pilot scheduling a portion of research visits. Additionally, collaboration occurred with research stakeholders to capture all of the resource use and requirements for each research study, with the intent that this

data would later serve for comprehensive research and clinic patient scheduling integration. While this is an ongoing initiative, this project initiated key activities and provided a foundation to begin addressing this long-standing point of frustration.

OUTCOMES AND FINAL THOUGHTS

Stakeholders recognized the significant benefit from the project and were pleased with the quantitative and qualitative results and the positive impact to patients, research subjects, physicians and all other clinic staff. This project provided several important guidelines for consideration in future endeavors:

Establish a Governance Structure. This is a critical element of success and should include an Executive Steering Committee and Core Team dedicated to the project. An Executive or Physician Champion is highly recommended to ensure ownership and accountability

Engage the team in problem solving and project tasks. Involve the team, super-users and subject matter experts to identify and create early quick wins; provide transparency and communication of data/results; leverage proven Lean Six Sigma tools; and develop a culture engaged in continuous improvement.

Clearly delineate project scope, responsibilities and deliverables. One of the challenges relevant for this type of project is the common overlap in operational management of core clinic functions. This presents the need to ensure staff and project members understand their roles in the project to create successful outcomes.

Align performance expectations. Effective communications regarding the scope and project outcomes between the Core Team, Project and Executive Sponsors and Champions are essential to supporting change management within an organizational system.

Figure 1: New Patient Scheduling Improvements

New Patient Appointment Scheduling Impact

Team addressed several scheduling and process issues; with the largest impact on New Patient Scheduling.