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# Patient Satisfaction and Clinic Efficiency at The Ear, Nose and Throat Clinic at Sylvester Comprehensive Cancer Center

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# Patient Satisfaction and Clinic Efficiency

## *Improvement team explores range of possibilities to reduce long wait times*

Even the most patient of patients becomes frustrated by lengthy wait times to see a physician. Long wait times add to the anxiety of the healthcare experience, and they can affect patient outcomes by negatively impacting a patients' perceptions of services provided and their post-visit behavior, such as adhering to physician recommendations and followup.[1] In addition, Press Ganey found that as wait time increases, patient satisfaction drops.[2] Press Ganey is an administer of the Clinician and Group Consumer Assessment of Healthcare Providers and Systems (CGCAHPS) survey, which measures patient perceptions of care delivered by a provider in an office setting. The survey captures consumer input on quality issues, such as provider communication skills and ease of access to healthcare services.[3]

At the Ear, Nose, and Throat Clinic — one of 11 hospital-based clinics at Sylvester Comprehensive Cancer Center (part of the University of Miami's UHealth System) — Press Ganey data surfaced conditions that could result in unsatisfactory patient experiences. Data was based on results of the CGCAHPS survey question "patient sees provider within 15 minutes." The clinic recorded an average wait time of 86 minutes, from the moment a patient signs into the clinic to when the patient is seen by a doctor.

The clinic's findings presented an opportunity to improve patient satisfaction and clinic efficiency, and impact costs. Reimbursement in value-based purchasing is driven by CGCAHPS, and the clinic wanted to ward off any potential for penalties.

Based on patient perceptions and the engagement of physicians who "were eager to see changes and to see performance-improvement-related activities in the clinic," the Ear, Nose, and Throat Clinic was chosen for an improvement project, says Angela Olier-Pino, Executive Director of Nursing for Ambulatory Clinics. A cross-functional improvement team was formed to reduce the wait times.

### The Ear, Nose, and Throat Clinic

The Ear, Nose, and Throat Clinic (part of The Ear Institute) is one of 11 hospital-based clinics at Sylvester Comprehensive Cancer Center (part of the University of Miami's UHealth System).

The Ear Institute is a global center for all hearing loss conditions, evaluations, and treatments, and also is as a primary location for continuing medical education and NIH research for standards and practices.

The Ear, Nose, and Throat Clinic is a multi-specialty clinic that hosts Otolaryngology providers from five different specialties focused on diagnoses and treatments of the ear, nose, and throat.

The clinic hosts 16 attending doctors and includes 16 exam rooms. It utilizes centralized services, including patient access teams for registration and patient checkout, provider schedule-template building, scheduling of appointments, and insurance verification/authorization.

[1] C. Jeanne Hill and Kishwar Joonas, "The Impact of Unacceptable Wait Time on Health Care Patients' Attitudes and Actions," Department of Management and Marketing, Prairie View A & M University, 2005.
[2] Marty Stempniak, "The Push Is on to Eliminate Hospital Wait Times," *Hospitals & Health Networks,* November 2013.
[3] "About CAHPS," Agency for Healthcare Research and Quality.

UHealth utilizes dashboards that display key performance indicators at the service-line level, including Press Ganey data, and those findings are routinely further broken down by department. The Ear, Nose, and Throat Clinic was one clinic in our area that was underperforming, says Gloria Campos, Project Manager, who is an improvement project manager for six distinct areas, of which Ambulatory Clinics is one of the six. "Our desire is to benchmark at 70 percent of our peer rank in Press Ganey, and the clinic wasn't meeting that. We are constantly looking for opportunities and areas to improve. Our focus areas are driven based on key performance indicators, including the performance against the desired peer group rank in Press Ganey. Therefore, this clinic's underperformance was identified as our next focus area."

## AEH Training Brings Fresh Perspective

The Ear, Nose, and Throat (ENT) Clinic receives 70 to 100 patients per day across its five practices. Approximately 16 physicians treat patients in the clinic, with about six or seven physicians on staff per day (most physicians work either a morning or afternoon shift). The clinic consists of four pods; each pod has four rooms where physicians treat patients. Reducing wait times would involve many physicians and nurses and positively impact hundreds of clinic patients.

In addition to reviewing the key performance indicators on the dashboards, clinic leadership and staff are always looking at processes for opportunities to improve from both a clinician and a patient perspective, says Olier-Pino, and from those opportunities arise potential projects that are prioritized to those that will bring the most value to the patient. "What are the things that we can do to improve the patient experience?" Within Sylvester Comprehensive Cancer Center as a whole there is a "huge initiative to improve the patient experience." The health system looks first to improvements that can be achieved in a short period of time — three to four months — and with a small, focused team, rather than long, resource-intensive efforts where outcomes may be less certain.

**Clinic Improvement Team**

- Dr. Gustavo Fernandez
- Angela Olier-Pino
- Lauren Gjolaj
- Gloria (Gigi) Campos
- Dr. Merce Jorda
- Rebecca Lebwohl
- Nicole Doell

The clinic improvement team represents three disciplines: physician clinical (Dr. Gustavo Fernandez, Medical Director and Associate Chief Medical Officer); nursing clinical (Olier-Pino as well as Nicole Doell, Director of Nursing for Ambulatory Clinics, and Lauren Gjolaj, Director of Clinical Operation); and operations improvement (Campos and Rebecca Lebwohl, Project Coordinator). "We really wanted to make sure we had representation of the three major stakeholder groups on this team," says Campos. "A multidisciplinary team makes it easier to analyze the data and review the information in different ways. As a team, we can take the bias out of the individual disciplines' perspectives. We're just presenting the data."

The clinic improvement team attended AEH training at The Ohio State University in October 2015. The team learned about and improved their understanding of lean tools and techniques, such as value-stream

mapping, level scheduling and takt time, process flow, and waste elimination. The team reported their initial improvement-project findings in February 2016.

When the project started, the team believed that one of the major drivers of change would be to address the physician clinic scheduling template — an electronic tool to manage and schedule a patient population. Because the improvement team would be venturing into relatively new territory, they thought it would be beneficial to bring in "fresh eyes that would help us see things differently and really give us the tools to present a good case to leadership that this was something that needed to be done or something that needed to be reviewed. I think we were able to accomplish a lot of that with Ken [Robinette, AEH instructor], because with the use of the takt time analysis, we really were able to see that the physician schedules determined the takt — how quickly each patient needed to be processed at every step in order to meet the demand for the number of patients scheduled every hour. That was really enlightening for our team."

The team selected two ENT providers with similar practice specialties to serve as pilot groups to be studied, and used a variety of techniques, in addition to analysis of the physician templates, to evaluate the patient process and wait time problem:

- *Voice of the customer:* The team started by trying to understand the general satisfaction of those working in the clinic process and the perceived issues they encountered. They used an online survey tool to solicit input from practitioners, nurses, and clerical staff. They found out, for example, that eight of 10 physicians are less than satisfied with clinic wait times; nine of 10 physicians stated that patients complain regarding wait times at least once per week; and 10 of 10 physicians agreed that patients complain that they were not communicated to about delays. All nurses stated that patients complain about wait times at least weekly, and four of seven nurses identified issues with daily workloads.

- *Data verification and shadowing:* The team had access to EMR data related to the problem, but was not confident that the information reflected reality. Team member Lebwohl manually collected information in the clinic to see how it aligned with the data in the EMR. This would help the team determine what EMR data they could rely on to manage the process, because it would not be practical to manually collect data for the duration of the project.

  Certain pieces of the EMR data were confirmed as accurate, such patient arrival to intake start, but other times, such as physician times with a patient, were not operationalized in real time the same way the EMR collected the data. "For example, a physician could walk into the patient room and not pull up the EMR," says Campos. "They may just have a candid conversation with the patient before they pull up the medical record."

- *Template and takt time analysis:* The template analysis looked at scheduling of patients per pilot physician by the hour to determine demand or takt time (see *Takt Time by Hour of Day*).

## Takt Time by Hour of Day

| | | Hour of Day | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | | Day |
| Provider 1 | Minutes | 60 | 60 | 60 | 60 | | 60 | 60 | 60 | 60 | | 480 |
| | Demand | 5 | 4 | 5 | 5 | | 5 | 4 | 4 | 4 | 32 | 29.44* |
| 6 min | **Takt** | **12** | **15** | **12** | **12** | | **12** | **15** | **15** | **15** | | **16.30** |
| | NPV | 5 | 4 | 5 | 2 | Lunch | 0 | 0 | 0 | 0 | | *Assumes 8% N/S rate |
| | FUV | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | |
| | Swing (NPV/FUV) | 0 | 0 | 0 | 1 | | 1 | 0 | 1 | 0 | | |
| | Swing (URG Access V/In House Ref) | 0 | 0 | 0 | 2 | | 0 | 0 | 0 | 1 | | |
| | Swing (FUV/PostOp/Debridement) | 0 | 0 | 0 | 0 | | 4 | 3 | 3 | 3 | | |
| | Swing (FUV/Debridement) | 0 | 0 | 0 | 0 | | 0 | 1 | 0 | 0 | | |
| Provider 2 | Minutes | 60 | 60 | 60 | 60 | | 60 | 60 | 60 | | | 420 Late |
| | Demand | 6 | 6 | 6 | 3 | | 6 | 6 | 6 | | 39 | 33.15* |
| 15 min | **Takt** | **10** | **10** | **10** | **20** | | **10** | **10** | **10** | | | **12.67** 77.25 |
| | NPV (30 minutes) | 2 | 2 | 2 | 1 | Lunch | 2 | 2 | 2 | | | *Assumes 15% N/S rate |
| | FUV | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | | |
| | Open (15 minutes) | 4 | 4 | 4 | 2 | | 4 | 4 | 4 | | | |

- Provider 1's time with patient meets Takt
  - However, when reviewing Takt using the room as a resource, Provider 1's clinic does not meet Takt.
- Provider 2's time with patient does not meet Takt

Source: The Ear, Nose and Throat Clinic

For example, Provider 1 scheduled five patients for the first hour of the day: i.e., takt time of 12 minutes or an ability to spend 12 minutes with each patient. The team believed that physicians were probably planning to spend at least 15 minutes with each patient and were overbooking due to possible cancellations. The team's analysis revealed that even when cancellations occurred, patient wait times still would accumulate and grow throughout the day. The template analysis was coordinated with a workflow analysis (below) to get a sense of how long each step of the process took and how many resources were dedicated to each step, which resulted in an understanding of the cycle time measure for each process step.

- *Workflow analysis:* The team mapped out the value streams of the two providers' processes to track check-in and registration, intake, patient seen by doctor, and patient education and discharge. The maps recorded the time experienced by the patient, value-added time, cycle time, and room utilization.

  The team looked at the utilization for Provider 1 patients, overall and for individual steps, and there did not appear to be any issues of overutilization. For example, the step for fellows seeing patients was at 85 percent utilization. But when the team examined the utilization for the room in which care is provided and collectively for all the steps that must occur within that room during that time — intake by RN, patient seen by fellow, patient seen by MD, and nurse education and clinical discharge — the problem appeared. Not accounting for a patient waiting between handoffs from step to step, utilization was 108 percent (see *Provider 1 Value-Stream Map*).

  The Provider 2 process also was problematic. In-room utilization was 96%, but Provider 2 takt

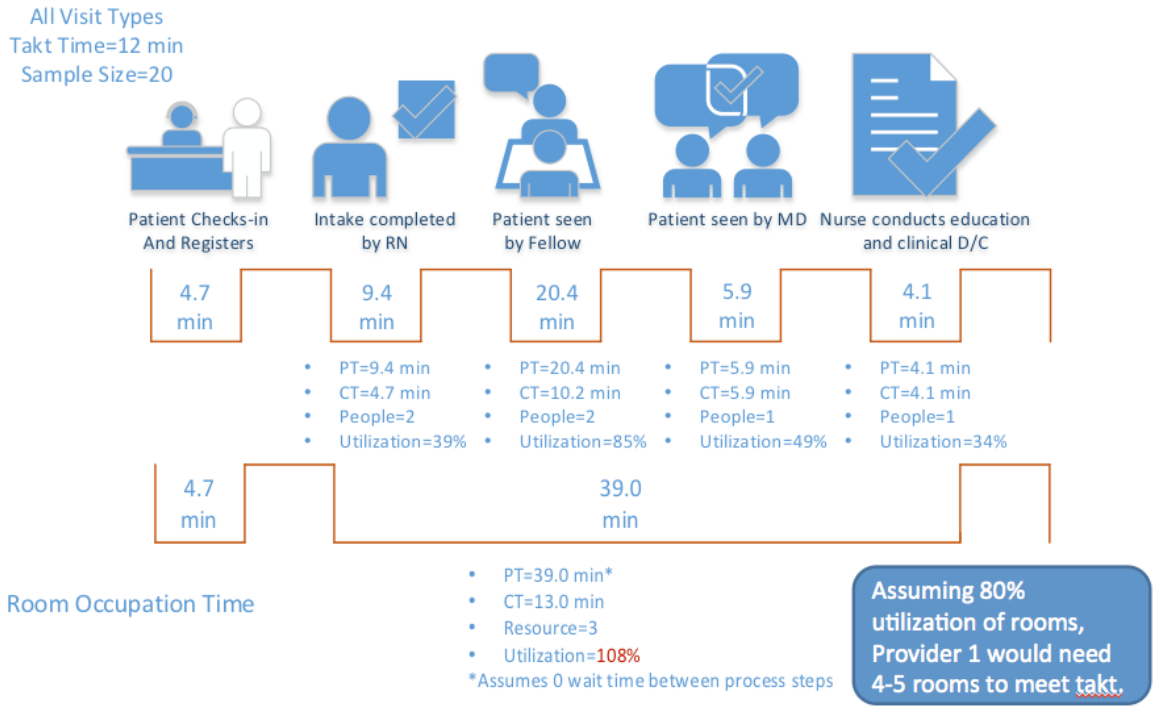
time was 10 minutes, even though he was spending 15 minutes or more with patients — physician utilization of 153 percent.

As part of their workplace analysis, the team also developed a spaghetti diagram to track staff movement. These flow diagrams revealed a lot of chaotic movement and a variety of wastes that occurred, including reprocessing of patients, batching of appointments, patients waiting in numerous locations (including first patients of day waiting to be checked in and at intake), and excessive movement by staff. For example, Lebwohl says that nurses were going to a far-removed supply room five or six times a day. "That's a lot of wasted movement."

Lastly, the team looked at staffing levels, staff procedures, and room allocation. This review was intended to help standardize roles, align staffing and schedules with demand, improve room utilization, and remove barriers to improved patient flow. For example, the team realized that staff responsible for patient intake started their day at the same time patients were arriving, creating a delay in the start of the first patient visit.

Based on their findings, the team established a goal to reduce the wait time in the clinic by 50 percent to 43 minutes. The team's efforts were aligned with the directional goal of decreasing patient wait time and increasing patient satisfaction, within the organizational constraints.

**Provider 1 Value-Stream Map**




Source: The Ear, Nose and Throat Clinic

## Developing and Implementing Countermeasures

The team put in place an action plan that focused Phase 1 actions on areas that were most in their control, says Doell. Actions being implemented in March and April included:

- Nurses must have clinic rooms prepared prior to the 8 am start time, and the intake for patients with 8 am appointments are completed prior to 8 am.
- A nurse is dedicated to the intake process, which lessens wasted movement of the intake nurse and also keeps other nurses in the proximity of clinic rooms.
- A checklist is used to ensure room instrumentation is standardized and properly stocked based on specialties occurring in those rooms, which alleviates room dependency and can prevent unnecessary trips to the supply room by nurses. Nurses sign and date the checklist and are held accountable.
- The team deployed a continuous intake process (i.e., eliminated the practice of batching patient appointments and intakes).
- The team created the role of a pod leader, which is a nurse in each pod that communicates delays to the front desk and patient-access staff. The team also began in-services for RNs to standardize a triage nursing process to make sure there are no delays for patients with immediate needs.

As important as the physical changes underway, the team has been using data to "change the conversation" about the causes of the long wait times, says team member Gjolaj. Instead of being stalled by beliefs and perceived solutions, the team presents their findings: "This is what the data is telling us. What do we think the solutions might be? How do we track and trend once we implement the solutions to make sure we actually fix the problem?"

Campos adds, "I think everyone would have thought when we started this project that we wanted to tell the physicians, 'See patients faster. You're moving slowly, and that's why you're behind an hour and a half.' We took that context out of it and said, 'OK, if you want to take 15 minutes with the patients, that's fine. But that means you really can only see this number of patients an hour, because that really drives your takt. How long you spend with the patient drives your takt, and so that should drive your demand.' And certainly that made it a very different conversation."

Those conversations and team work also have included issues that are high among physician concerns. The team looked at the number of rooms allotted per physician and how they might be able to get physicians access to more rooms. Prior to the project, a physician was assigned to one of four pods regardless of their patient volume. One of four rooms in a pod is dedicated to procedures, so a physician may only have access to three rooms. Even when an adjacent pod had an available room, a physician in need could not use it. The team is now attempting to assign some rooms across pods to physicians when capacity is available because that can remove bottlenecks and improve flow through the clinic.

## Early Results and Next Steps

Phase II of the project calls for the team to expand and apply lessons learned with the two pilot physicians to other physician practices in the clinic. They also will begin to revise job descriptions and standard operating policies to hardwire changes to staff procedures. Last but not least, they will plan deployment of template modifications with a pilot physician. Changes to physician templates remain a challenge, but the team has recognized the pragmatism necessary to balance physician requirements with patient wait times.

Within the UHealth System, as in many healthcare organizations, overbook slots often are added to provider schedules to optimize utilization. However, it creates the potential for overutilization. “Trying to balance those priorities is hard,” says Campos.

The data compiled by the improvement team made physicians more factually aware of overbooking and its impact on overall patient satisfaction, and is helping to get buyin. The team has reiterated that their goal is not to change the duration or quality of time that doctors spend with patients, but to schedule patients with a template based on real conditions. But, says Campos, the project may impact the length of a physician’s daily schedule, their non-patient clinic time, and/or when they schedule overbook slots. A daily schedule frontloaded with overbook slots contributes most to long wait times. Physicians may catch up by working into their lunch hour, but they eventually take lunch and fall behind again.

A goal of the team was to present some wins to physicians before touching their templates and scheduling procedures. “Once we have some wins with the wait time, the goal would be to address it with the physicians and really look at their templates,” says Campos, “and change their demand by hour to align to how long they’re spending with the patients.”

The team reports that their presence within the clinic, asking questions, and monitoring actions may have qualitatively improved some conditions (i.e., Hawthorne or observer effect), but wait time data has not yet achieved the results the team is expecting. “By April 1, we’re hoping to have full implementation of our Phase 1, and then we’ll re-evaluate [the Press Ganey data and wait time data] at that point,” says Campos. The team also plans to again administer their voice of the customer survey to gauge physician and nurse perception of changes.

Campos also notes, “Some [physicians] have already reached out to nursing leadership and asked that their practice be the next one to be reviewed. So that has definitely been a win for us as well… There has been a general sense of increased staff satisfaction with making some of these changes. There are still, obviously, some people that are just hesitant to the change. But, overall, there has been a positive sensation about the wins for this project.”

The team also is conscious that while their project focuses on wait times and patient satisfaction, other changes are regularly underway throughout the clinic and that staff can experience “change fatigue” and a sense of “flavor of the month.” Daily rounding of the area by the team keeps them abreast of such issues and helps them continually solicit input from those engaged in patient care.

Gjolaj says that throughout the project it has helped to have the tools and analytical rigor that team members gained at AEH, specifically takt time analysis and value-stream mapping. They are using the tools on the wait time project as well as new projects in the clinic with which they are involved. “A big lesson learned for us was to not jump to the solutions and really spend the time and do the due diligence based on the data, based on the voice of the customer, and based on a thorough analysis.” While some preconceived ideas of the team were “spot on,” other solutions would have been ill-advised had the group not stayed true to the process.

“We are investing the time and developing the framework,” adds Gjolaj. “[We are] taking the time on the front end, which may feel a little slower and may feel a little more than is necessary sometimes, to be able to go fast when implementing the solution.”

## AEH Commentary

The Ear, Nose, and Throat Clinic illustrates the importance of thorough, fact-based analysis and the need for many disciplines to examine all facets and potential root causes of a problem, even when solutions may seem obvious. While a perceived solution may, indeed, be what is selected and implemented, the clinic team is finding that other countermeasures and process improvements help to grow momentum and make additional, more difficult changes.

The project also reveals how a combination of lean tools and techniques — value-stream mapping, takt time analysis, flow diagrams, etc. — help to examine a problem from various angles and contribute to a fuller set of countermeasures. These tools helped the clinic team to establish data measures not traditionally found in healthcare but certainly applicable to problems rooted in issues of patient flow, wait times, and provider utilization.

## About AEH

The Academy for Excellence in Healthcare blends in-person class time with hands-on project work, interactive simulations, and recurrent coaching, all aimed at helping healthcare teams spark actionable change at their organization. At the heart of this program is a real-world workplace problem each participant team selects and commits to solving through five intensive days on campus, followed several weeks later by two days of project report-outs and lean leadership training. This project-based approach pays immediate dividends and lays the groundwork for transformational change.

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