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IMPACT ASSESSMENT PAPER

Stroke Clinic Retention: Scheduling Recovery Care for Stroke Patients at OhioHealth

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Stroke Clinic Retention

Scheduling followup recovery care for stroke patients

At least one in four individuals who suffer a stroke will have another stroke within their lifetime, with the reoccurrence of stroke more likely to cause death or disability. Followup care for stroke victims — lifestyle modification, medical intervention, support through the stroke-recovery process — is critical to prevent a reoccurrence of a stroke.

OhioHealth, a not-for-profit healthcare organization based in Columbus, provides followup stroke care through its Stroke Prevention Clinic, a first for the OhioHealth system. Phase I of the Stroke Prevention Clinic was implemented at Riverside Methodist Hospital (RMH) prior to rolling it out to other OhioHealth hospitals. Followup stroke care typically lasts up to 18 months after a patient has suffered a stroke and been released from the hospital. This longitudinal patient management provides supportive care to the stroke survivor and caregiver, decreasing hospital readmission and subsequent stroke while actively managing comorbidities and coexisting conditions.

“Once someone has had a stroke, their risk for a second stroke, depending upon their comorbidities and coexisting conditions, is higher,” says Renee Pack, System Program Director for Cerebrovascular. “So we are motivated to get them back to the clinic in order to prevent that second stroke.”

Historically at RMH, a patient’s neurologist recommended at least one followup visit after stroke. Yet the Stroke Prevention Clinic found that only 24 percent of discharged stroke patients were seen once within the first six months by a neurologist. This spurred a gathering of RMH neurologists in July 2014, who subsequently established that they wanted to move in a different direction with stroke survivors and their caregivers — they wanted to manage them longitudinally.

“All of the neurologists felt strongly that stroke patients and their caregivers would be cared for by the interdisciplinary team at the Stroke Prevention Clinic,” says Pack.

With this shift in stroke aftercare, the clinic tracked capture rate from July through August 2014: *only 48 percent* of eligible RMH stroke patients were scheduled for followup care at the clinic. (Of those that were scheduled, only 75 percent showed up for treatment.) The findings supported the need to better coordinate followup recovery care for stroke survivors.

OhioHealth Stroke Prevention Clinic

OhioHealth is a not-for-profit healthcare organization that includes 11 member hospitals and 10 affiliated hospitals, including Riverside Methodist Hospital (RMH).

RMH treats more stroke patients than any hospital in Ohio and is the first hospital in Ohio to be designated a Comprehensive Stroke Center by the Joint Commission. The hospital will be home to the new OhioHealth Neuroscience Center, opening in summer 2015. RMH includes:

- 1,050 hospital beds
- 29 operating rooms
- 43,318 inpatient admissions
- 15,958 observation patients
- 21,677 total surgeries
- 84,169 emergency visits
- 799,449 outpatient visits

Understanding the Stroke-Retention Problem

The Stroke Prevention Clinic presented their scheduling and followup-care opportunity as an improvement project to the Academy for Excellence in Healthcare (AEH) at The Ohio State University. Clinic staff had become aware of AEH scholarships through a colleague enrolled in the Master of Business Operational Excellence program at OSU. The stroke-retention project was accepted by AEH, and an improvement team attended one week of AEH training in autumn 2014, where they learned about and improved their understanding of lean tools and techniques, such as value-stream mapping and root-cause problem solving.

At AEH the improvement team worked with Dr. Mrinalini Gadkari, a senior lecturer in OSU's Management Sciences department and a coach in the

MBOE program, and Margaret Pennington, faculty director for AEH (see *Supporting the Improvement Team* on page 8). The two pushed the team to identify a solvable problem and to identify root causes via value-stream mapping.

Stroke Prevention Clinic Improvement Team

- Dr. Jennifer Mejilla, Vascular Neurologist and Physician Champion
- Renee Pack, System Program Director for Cerebrovascular
- Debbie Graves, System Director of Business Planning and Analysis for System Neuroscience
- Paula Meyers, System Director OhioHealth Stroke Network

The improvement team initially struggled to create a problem statement for an addressable problem. “Our problem statement originally going into Week 1 of the [AEH] conference was ‘We needed to retain our stroke patients,’” says Pack. “Peg Pennington and Dr. Gadkari really encouraged us over the course of the first few weeks after we got out of class to formalize and narrow that scope. Our problem statement became ‘100 percent of eligible patients to followup in the Stroke Prevention Clinic.’”

Paula Meyers, System Director OhioHealth Stroke Network, adds, “The three of us always looked at the problem as a huge problem, and we had a hard time ... narrowing our focus. Taking this class with the Academy really helped us learn how to define the problem a bit better than what we had done in the past.” The team established goals of 75 percent of RMH eligible stroke patients scheduled for followup care at the clinic by April 2015, and 100 percent of eligible patients scheduled by July 2015.

With support from their physician champion Dr. Jennifer Mejilla, the team created a value-stream map of a stroke patient's journey: registration into the RMH emergency department, ED assessment, admit to the stroke unit, home/rehab/skilled-nursing facility, verify team list, set up appointment, and patient arrival to the Stroke Prevention Clinic. The mapping helped the team to see the problem through the eyes of those working within the value stream, the very individuals who were in position to help resolve the problem.

In developing the map, the team identified multiple problem areas that contributed to stroke patients not being scheduled and treated at the clinic, including:

- Nurses at the stroke unit were not aware of the clinic and, thus, not informing patients or families of its availability.
- The clinic did not have access to the Horizon Expert Documentation (HED) system, and so it was difficult to get a timely list of stroke patients being treated at RMH.
- No information or incorrect contact information was available on stroke patients. Of the 52 percent of eligible stroke patients not getting followup care at the clinic, nearly one-third could not be reached because of inaccurate contact information.
- Scheduling calls for stroke patients were batched, occasionally with calls being made long after a patient had been discharged from the hospital. Some stroke patients were never called to set up a clinic appointment.

“We chose to map out the process from the time that they hit our emergency department at OhioHealth to the time that they got to the Stroke Prevention Clinic,” recalls Pack. “That was a pretty gangly, a long process with lots of barriers. When we put everybody in the room, I know that there were some eyes opened.” For example, she recalls how registration staff were surprised and unaware of the impact that incorrect contact information eventually had on patient followup.

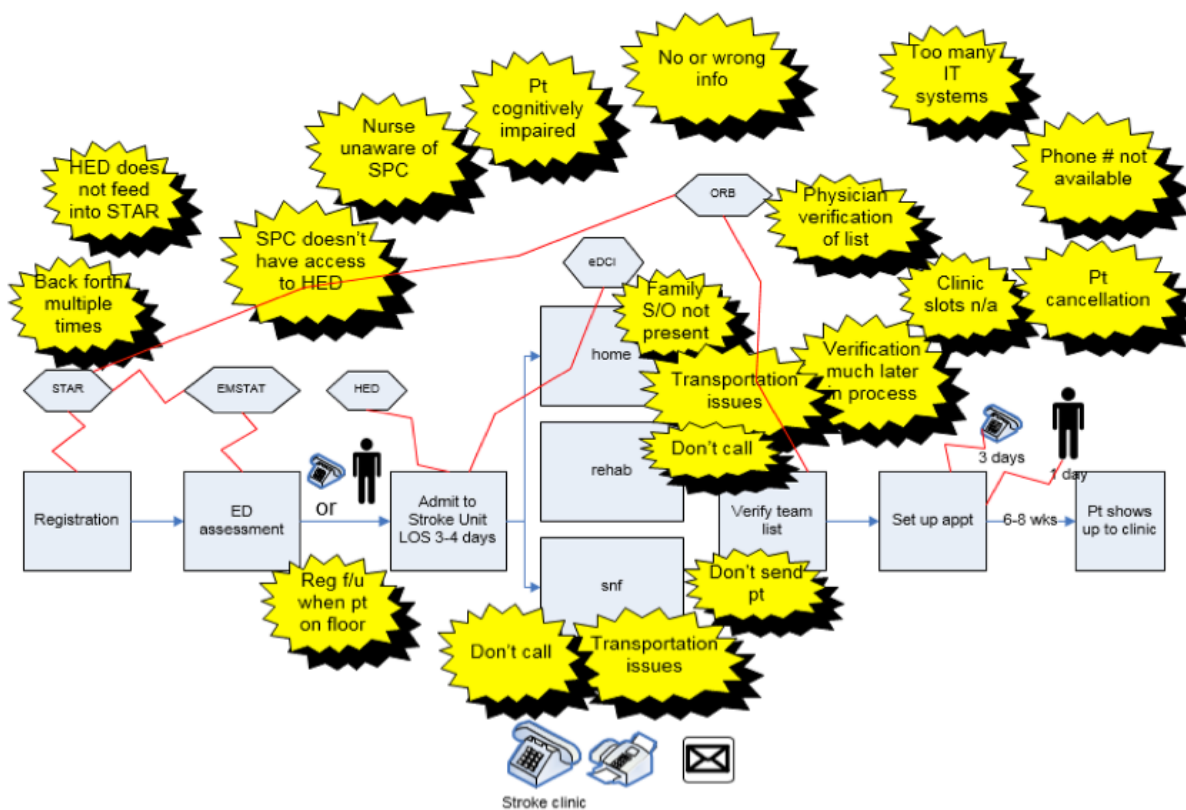
Debbie Graves, System Director of Business Planning and Analysis for System Neuroscience, says that it was extremely beneficial to be involved in mapping the process from the beginning of the improvement project. “We all have been part of some mapping processes, however, we never really had the background to truly understand and see everything from A to Z. We were brought in maybe at the L and M period... This way now we truly understand it better.”

As the team examined their map with hospital staff and applied the many starbursts that indicated a problem (see *Stroke Patient Value-Stream Map*), they also experienced the power of Five Whys and the effect that the investigative tool can have on driving toward root causes and in challenging others to identify the real causes. “Everybody was just slightly irritated by our asking the Five Whys,” notes Pack. “But I thought that got us to a point where we were able to come up with solutions that were fact-based and that were actually going to create a solution for the problem. That was helpful.”

Graves says she learned from AEH that “you can never go into a project now with any kind of pre-perception — you have to go into it with an open mind. What you think is going on might not really be what’s going on, and what you think you’re tackling ends up not being the root cause. Root-cause analysis is huge, and I face that almost daily, even just in simple communications.”

The team quickly compiled multiple countermeasures for their many value-stream starbursts, prioritizing them by low effort and high impact (see *Prioritizing Starbursts*). The team says the range of problems and potential solutions was a bit overwhelming. “You can’t tackle them all at once,” says Meyers, “and you can’t tackle them all before you get something accomplished... We all have a tendency to want to get *everything* done.”

Stroke-Patient Value-Stream Map

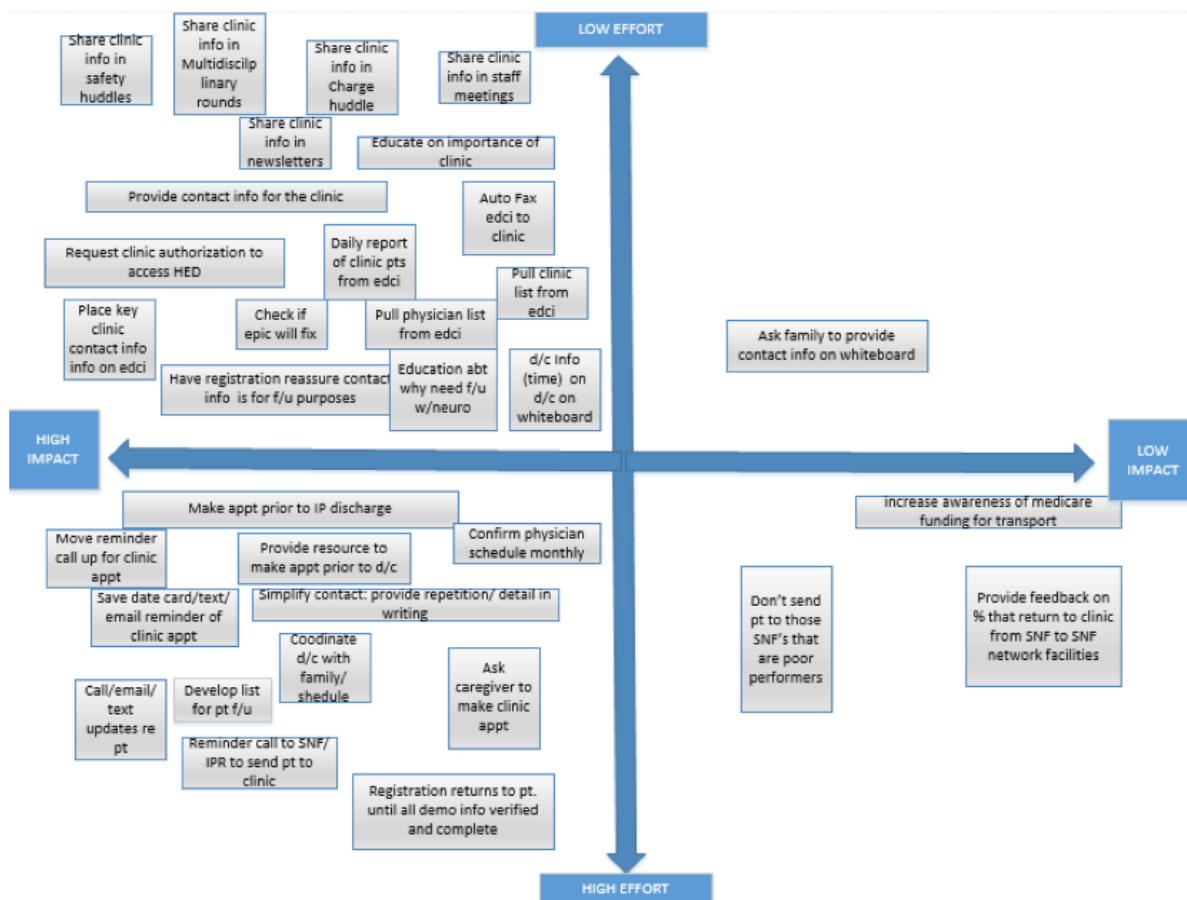


Source: OhioHealth

Topping the list of countermeasures was educating nurses about the Stroke Prevention Clinic and establishing with high reliability that eligible patients were identified on the electronic discharge instructions, thus alerting nurses to discuss the clinic with stroke patients. The improvement team also had found that many patients and caregivers refused to be scheduled because they planned to make appointments with the own neurologist, not realizing that their neurologist would be at the Stroke Prevention Clinic.

“We came up with four very quick, targeted educational facts describing that the neurologist is the lead at the multidisciplinary clinic and that it’s located near Riverside; we hadn’t told anybody where it was,” says Pack. The literature also explains that a clinic team in collaboration with the patient’s primary care provider closely monitors and manages the diagnosis, which can reduce the risk of a second stroke, and that support for the survivor and the caregiver through the recovery process will last for the first 18 months after the stroke. After implementing the education materials, the improvement team evaluated the change in nurse behaviors, and could see that lines of communication had been opened and they were satisfied with the results.

Prioritizing Starbursts



Source: OhioHealth

Results and Next Steps

By early 2015 the improvement team had implemented most of their low-effort, high-impact countermeasures:

- *Staff access to information and ability to take action:* Clinic contact information was placed on the patient’s electronic discharge instructions, which are reviewed by the nurse on discharge to increase nurse and patient awareness of the clinic. Information about the clinic also was shared during stroke-unit staff meetings, huddles, and multidisciplinary rounds.

Stroke Prevention Clinic staff requested and received authorization to the HED inpatient documentation system. “They didn’t have access to that, and that’s where the most accurate contact information about the patient and caregivers was located so a clinic appointment could be scheduled,” says Pack. “We also pushed forward into the Stroke Prevention Clinic a daily electronic list of those patients who were ready for discharge so that we could schedule a clinic

visit prior to discharge from the hospital. As patients saw it on their discharge paperwork, they knew the time and date of their clinic visit and had the opportunity to have their questions answered by their nurse before discharge.”

The improvement team also has worked to remove unnecessary process steps that contributed to the batching of scheduling activities.

- *Correct information:* Clinic access to HED also helped to improve the accuracy of demographics compared to the registration information, which was given by family members at a time of crisis. “During a stroke alert the family is in crisis, and any phone number they would give the registration staff was not generally accurate,” describes Pack. “When the patient arrived to the nursing floor after the emergent situation, the nurse asked for family and patient contact information, which most of the time was a different phone number than the family and the patient initially offered. The clinic previously had no access to that information.”
- *Educating patients and caregivers:* “I think it helped that we spent some time educating the family, starting on Day One of the admission, to let them know what the expectation was and what the Stroke Prevention Clinic was,” says Meyers. “I don’t think we were doing a good job in letting the family members know what it was.”

The clinic is currently calling patients and their caregiver to get them scheduled, and then calling them prior to their clinic visit to be sure there are no issues that would prevent followup care. The improvement team was surprised to find a low percentage of patients not getting to the clinic due to transportation issues — they identified, instead, a lack of education for and communication with patients as the main culprit.

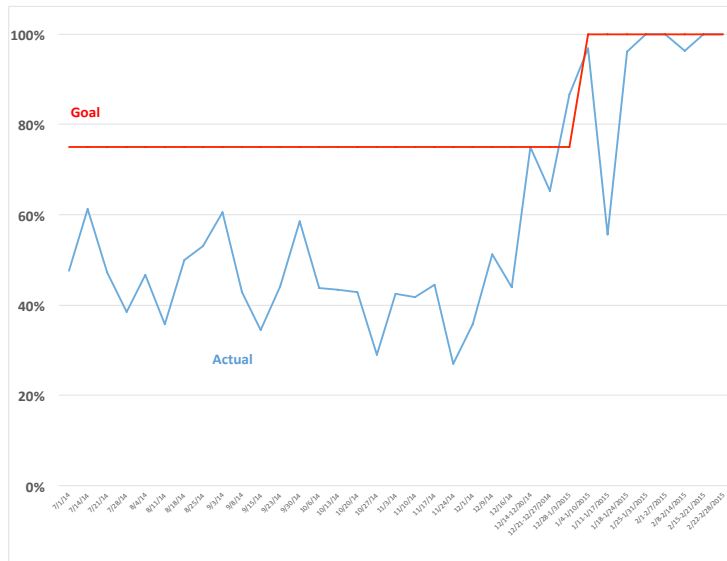
“The patients and their families just didn’t understand,” says Graves. “As we kept talking about the stroke clinic, they just wanted to follow up with their neurologist. They didn’t understand that the neurologist would be in the stroke clinic — that’s who runs the stroke clinic.”

In early March the improvement team had begun to reach 100 percent of eligible *acute* stroke patients on a weekly basis — patients with active signs and symptoms of stroke, who came to RMH with a stroke diagnosis (see *Scheduling Progress at RMH*). The focused AEH training program and the need to quickly report back results to AEH after the initial training session pushed the team along at a pace that was new to their environment.

“This is really a cultural shift in managing stroke patients in a longitudinal way,” says Pack. “So while we showed some good progress between our first and second session at the Academy, this is really a life-long change in the way that we approach problems here... All of us use the tools that we learned in the Academy for daily work as a way to make our daily work a little more efficient and a little more effective.”

A process is in place to schedule non-acute stroke patients when the Stroke Prevention Clinic is at full physician capacity. “There are some non-acute patients whom we’re not seeing that we should be seeing,” says Pack. “We had to start somewhere and that was with the patients that we could give the most benefit, and that was with the acute stroke patients.” When the clinic moves into the new Neuroscience Center, it will ramp up to full physician capacity, full midlevel capacity, and have a complement of supporting

Scheduling Progress at RMH



Capture rate of eligible Stroke Prevention Clinic patients, July 2014 through February 2015

Source: OhioHealth

fields (e.g., physical therapists, occupational therapists, speech therapists, social workers, dieticians, etc.). In July, the scheduling process for eligible stroke patients also will be extended to all OhioHealth facilities.

The improvement team believes the current improvements are sustainable and that their mid-year goals will be reached. “With the expanded services, we’re going to be offering in the Neuroscience Center, it will be an interdisciplinary center for the stroke clinic as opposed to just seeing your neurologist,” adds Graves.

The improvement team is analyzing the follow-through of scheduled patients (e.g., percentage that cancel, no-shows, etc.) in order to ensure that as the volumes of patients scheduled for the clinic increases the percentage of no-shows does not increase as well. Because the first visit usually does not occur until six weeks after discharge, there is the potential for a high rate of no-shows. The team also has identified the mechanisms (e.g., save-the-date cards, followup calls, transportation assistance) to help patients get to their scheduled clinic visits.

The improvement team will track readmissions of stroke patients to see how that outcome has changed. It has so far received feedback that stroke survivors and their caregivers are satisfied with the services provided by the Stroke Prevention Clinic. The first step in that satisfaction was making them aware that the clinic existed and getting them scheduled for treatment.

AEH Commentary

The improvement project at OhioHealth's Stroke Prevention Clinic illustrates that the first, powerful step in solving a problem is a concise problem statement that allows a group to analyze the process and problem, identify root causes, implement solutions, and measure progress. Organizing their project around a manageable problem also helped the improvement team to get the right stakeholders in the room to work through the process, starting with development of value-stream maps to surface the problems and root causes to developing and implementing solutions.

The stroke-retention project also reveals how many perspectives of a problem can exist, but the only one that really matters is that of patients as they move across the entire process. Only by mapping that overall journey of a stroke patient — registration to the arrival at the Stroke Prevention Clinic — was the improvement team able to identify all the ways they could positively impact the scheduling and followup-care process. That required a cultural shift in how to manage, schedule, and treat stroke patients, one that now aligns with the reasons behind the genesis for the stroke clinic — a longitudinal approach to more closely follow and support stroke survivors and their caregivers for the first year and a half after a stroke.

Supporting the Improvement Team

The improvement team cited the support and guidance provided by Dr. Mrinalini Gadkari of AEH in helping them to make change, noting her many gemba visits to Riverside Methodist Hospital and participation on weekly conference calls to assess the team's progress. She coached the team to establish a problem that was fixable and how to apply tools to evaluate the problem and create meaningful solutions. "She made us think differently," says Paula Meyers, System Director OhioHealth Stroke Network. "Being in healthcare you're trained to think one way, but she made us think more globally and to think outside of the box."

On one of Dr. Gadkari's early gemba visits, the team shared their value-stream map with physician champion Dr. Jennifer Mejilla, who kept the map in her office, recalls Renee Pack, System Program Director for Cerebrovascular. Dr. Mejilla would refer to the map with physicians and staff members of the clinic. "We had immediate interest by the physicians to improve the process. They realized that it was so important to get the patients back to the Stroke Prevention Clinic to prevent that second stroke and that we had challenges that maybe we should not have had. They were instantly engaged in helping to create solutions."

"Without Dr. Mejilla's support we would definitely not be where we are right now with our capture rate," adds Pack. "She spent countless hours assisting our team to get patients back to the clinic."

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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- Renee Pack
System Program Director for
Cerebrovascular
Stroke Prevention Clinic
OhioHealth
614-566-3909
renee.pack@ohiohealth.com
- Margaret Pennington
Faculty Director
The Academy for Excellence in Healthcare
The Ohio State University
614-292-3081
pennington.84@osu.edu

For Program Information

- Beth Miller
Program Director
The Academy for Excellence in Healthcare
The Ohio State University
614-292-8575
miller.6148@osu.edu