ACADEMY FOR EXCELLENCE IN HEALTHCARE

IMPACT ASSESSMENT PAPER

Improve Physician Rounding with Comprehensive Medical Unit at OhioHealth Riverside Methodist Hospital

Academy for Excellence in Healthcare IAP C-09 OHRMH

Dec. 28, 2016

THE OHIO STATE UNIVERSITY

FISHER COLLEGE OF BUSINESS

In collaboration with

Improve Physician Rounding with Comprehensive Medical Unit

Best practices and improved processes drive patient-centric care

When OhioHealth Riverside Methodist Hospital opened its nine-story Neuroscience Center in 2015, it presented an opportunity to convert vacated space on the healthcare campus to a Comprehensive Medical Unit (CMU). The CMU is based on the idea of an accountable care unit and was designed from the ground up as a model for improved processes and a platform from which best practices can be trialed, assessed, and shared.

CMU's challenge condition is to provide "exceptional value in an agile environment that respected each member of the healthcare team centered around the patient." The objective is to remove the silo approach to healthcare, in which patients typically move from nurse to physician to pharmacist to lab, etc. Instead of discrete professionals passing along patients and often repeating questions or missing opportunities for care insights, all *collectively* focus care on the patient. Riverside contracts with two hospitalist physician groups and large numbers of employed and contract positions and specialties work throughout the campus. Consistent communication among the many disciplines and to patients is a challenge.

The CMU leadership team includes a medical director and nursing director. Its steering committee — VPs, directors, and manager — identified five "critical moments" to address in achieving the unit's mission: admission, discharge planning, day of discharge, physician rounding, and sustainment/improvement system, says David Rutherford, Director of Nursing. "Physician rounding is an opportunity where we recognize the physician is most engaged in a particular patient's care. They are dialed into the chart. They understand what the issues are. It seemed to be the opportune time to get the nursing staff and the ancillary staffs involved and understanding that same plan of care that the physician is engaged in."

Riverside had tried to improve rounding in the past, but found it challenging. But the closed nature of the CMU, it's objective to trial and share best practices, and only one hospitalist physician group involved on the unit made it a good testing ground for revised rounding. Rounds were often randomly guided by the sickest patients or those who had family present. Timing wasn't consistent, nor were the staff who rounded alongside the physician. "[In the CMU] we were able to control for the variability of who is going to be rounding and when they are going to be doing it," adds Rutherford. Changes on CMU could either prove or disprove the importance of rounding, and offer a means to standardize rounding throughout the entire hospital.

OhioHealth
Riverside Methodist Hospital

Riverside Methodist Hospital in Columbus, Ohio, is the largest member of OhioHealth's 11-hospital network. The 1,090-bed general medical and surgical facility annually records more than:

- 40,000 annual admissions
- 12,000 inpatient surgeries
- 9,000 outpatient surgeries
- 88,000 emergency room visits.

Riverside is a teaching hospital, and it was named to *U.S. News & World Report*'s 2014 rankings of "America's Best Hospitals" for neurology and neurosurgery.

Lean Learning and Application of Concepts

A cross-functional CMU improvement team attended training at the Academy for Excellence in Healthcare (AEH) at The Ohio State University in June 2016. Another Director of Nursing at Riverside, Jill Treece, who helped lead the opening of the CMU, is an alumnus of the Master of Business Operational Excellence program at OSU. She was aware of what the AEH program had to offer and saw it as a great opportunity for CMU staff to work well together as a newly formed improvement team.

CMU Improvement Team

- Dawana Laase, RN
- David Rutherford, RN
- Blase Hennessy, MD
- Patrick Barr, MD
- Michael Huang, MD

OhioHealth has a Process Excellence department that assists with lean techniques, such as project management, scoping documents, and charters, and most of the team members had some awareness of lean concepts prior to AEH. The AEH training did, however, help them to grasp and apply the lean concepts and principles better, recalls Rutherford. The team learned about and improved their understanding of lean tools and techniques, including:

- *A3 thinking* and the need to thoroughly understand a problem before solving a problem;
- *Flow and pull* concepts, and how these methods contrast with batching and the problems that batching creates;
- *Process mapping* and how to break down each encounter within a process to fully understand its impact and the improvement opportunities each offers;
- *Takt time* and how the measurement helps to guide actions. ("We measure everything that we do on that floor now," says Rutherford, "and we try to make sure that we stay within our expected timeframes.")

Using a production preparation process (3P) and the support of the Process Excellence department at Riverside, the team and CMU leadership facilitated a four-day event during which they focused on rounding and the barriers and wastes associated with rounding. "The 3P event was very helpful for us," says Rutherford. "We observed the current state on other units. We identified best practices. We brainstormed alternatives. We used decision analysis, testing, and simulation, and then we [experimented] to come up with a solid implementation plan."

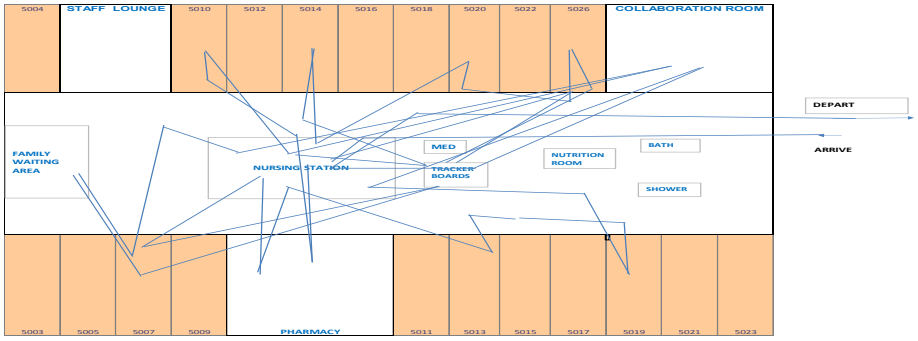
Rounding at Riverside typically involves the physician, charge nurse or bedside nurse, and pharmacy staff. It is the physician's opportunity to sit with patients, address their concerns, update them on their plan of care, and discuss medications. After rounding is completed, a multidisciplinary huddle (MDH) takes place, which includes ancillary departments —physical therapy, case management, social work, respiratory, dieticians, etc. — and gives those specialties an opportunity to provide input on care for patients. The MDH is often a better venue for some discussions than at the patient's bedside.

The team examined units within Riverside that were similar to CMU, which could remove some obstacles to acceptance once best practices were developed. They witnessed patients being seen by a wide range of caregivers, receiving many different services, and moving from one healthcare process to another. They

saw that communication and patient-care planning was a challenge, and all hospital staff, patients, and their families were not always on the same page regarding plan of care. The complexity of the care planning was compounded by problems with physician rounding: Practices were inconsistent, disorganized, and physician-centered. Rounding times varied by physician, floor, service, and consultation, including patient availability/patient care/patient condition. The improvement team believed issues with rounding contributed to physician communication scores at Riverside that, although rising, were below desired targets.

When observing the flow of rounds at Riverside, the team recorded the random patterns and movements with a spaghetti diagram (see *Rounding Flow*). They also documented the types of wastes they saw during rounds (e.g., transportation, motion, waiting, etc.); best practices they encountered (e.g., rounding team is visible, family present, orders entered during rounds); and factors that influenced variation in rounding flow (patient acuity, physician schedule, and physician workload).

Rounding Flow



Source: OhioHealth Riverside Methodist Hospital

The team's gemba visits surfaced problems associated with batching of patients, rework, and delays (rounds took as few as 14 minutes or as long as 3 hours and 37 minutes), as well as issues with multidisciplinary rounds (e.g., only 60 percent of key stakeholders were present, and 33 percent of patients required a revisit). The improvement team also asked questions of patients and recorded and analyzed the data specific to communication problems associated with rounds:

- 89 percent of patients were unable to articulate their hospitalist's identify, expected time of rounding, or who to have present when rounding occurs.
- 85 percent of the time the rounding physician was unable to identify the bedside RN prior to rounds.
- 75 percent of the time the bedside RN was unable to identify the rounding physician prior to rounds.
- The bedside RN was unaware of the presence of the rounding physician and only available to participate 10 percent of the time.

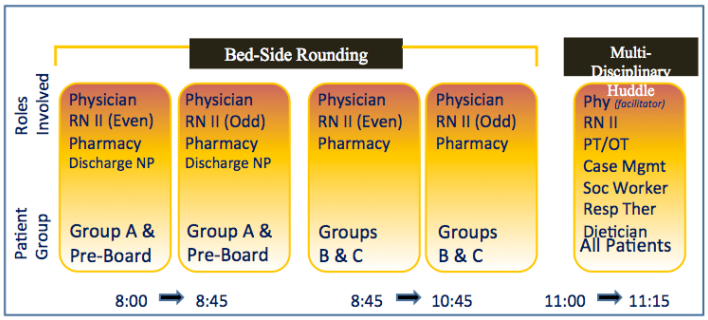
Goals and Countermeasures

Goals for the improvement project were originally set during the meeting of the steering committee. The group selected key criteria that would be indicative of a process that could be trialed and potentially shared. Rutherford describes the primary criteria as:

- *Team integration:* "We wanted to make sure that it wasn't just a physician rounding, but the entire team had some sort of say in the process."
- *Standardization of workflows:* "It could not vary from physician to physician or from charge nurse to charge nurse. It had to be standard."
- *Centered around the patient:* "The patient really [had to feel] the impact of whatever process we determined would be successful."
- *High-quality transition of care out of the hospital:* "We're moving into a value world and transition world, and we wanted to make sure that that remained a focus."
- *Maximize quality of care:* This was defined "in terms of safe, highly-effective, and efficient care."
- *Associate engagement:* "We didn't want rounds to be that people would just follow around and listen to a single person."
- *Minimize expense:* This was a consideration, but it was "the least prioritized component of any decision that we made. We didn't want expense to be a factor in trying something different."

Based on their analysis, the improvement team set a goal that rounding for 20 patients would be completed within 2.75 hours and that patients and their care team will be able to accurately identify a rounding time-frame for each patient. Two rounding periods would take place, from 8:00-8:45 am and 8:45-10:45 am. The team also wanted physician communication scores to improve by 5 raw-score percentage points as measured by HCAHPS, and for physician rounding practices and nursing involvement to improve by 50 percent in the first 90 days of the CMU opening.

CMU Rounding Future State



Source: OhioHealth Riverside Methodist Hospital

To achieve the rounding times, the team envisioned a future state for rounding, brainstormed ideas for standardizing and organizing rounding flow for the CMU, and put forth the following recommendations:

- Categorize patients into three groups based on need. The first group of patients would be those with increasing acuity and/or those that require immediate attention as well as patients expected to be discharged that day. Similar to Southwest Airlines "boarding groups," the team called their categories Pre-board and Group A, Group B, and Group C (see *CMU Rounding Future State*).
- Communicate the rounding timeframe to the patient, family, and caregivers.
- Involve necessary roles in rounding to optimize communication and efficiency.

To implement their recommendations, the team established a process to assign the rounding categories: A nightshift Comprehensive Charge Nurse (CCN) identifies patients and assigns them into one of the three groups. At 7:00 am, the nightshift CCN and dayshift CCN review the category list with the rounding physician. The list is then posted for the CMU staff to review and communicate with patients, families, etc.

For 20 patients, one physician will round, accompanied by a clinical (bedside) nurse (this role was an element of a new nursing model for Riverside). The rounding flow was simulated and tested in the CMU with individuals who were not patients (see *Simulating Rounding Procedures*). The team found that rounds for a single Group A patient took on average 6 minutes and 32 seconds: 43 seconds of travel, 1 minute and 27 seconds outside the room, and 4 minutes and 48 seconds inside the room.

Simulating Rounding Procedures

Source: OhioHealth Riverside Methodist Hospital

When actual rounding in the CMU began, RNs collected process measures to determine success of the new process over a longer period:

- Percentage of time accuracy for rounding
- Overall adherence to group rounding times
- Attendance of stakeholders at MDHs
- Number of interruptions during rounds
- Number of unresolved issues post-MDH completion

Rounding Improvements and Next Steps

The CMU team reported their initial improvement-project findings to AEH in October 2016. Because their permanent space was being refurbished, the CMU opened in a temporary location on October 10, with an average of 16 patients for the first week. The rounding time with each patient in October was 10 minutes (average), and an RN accompanied the rounding physician 100% of the time. The average duration for an MDH was 12 minutes.

The category assignments were capturing about 75 percent of the discharge patients, but the team believed 80 percent was achievable (a higher percentage is unlikely due to the potential for patient conditions to change overnight). The team also slightly adjusted their rounding categories and categorizing process: Groupings were changed to Pre-Boarding (critically ill patients, patients to be discharged, and then patients who will be at a test or procedure during rounds), Group A (Pod 1 patients), and Group B (Pod 2 patients).

The change in groupings was done to help nurses better understand and categorize patient conditions, and to accommodate the temporary CMU location, which is physically divided into two pods. In addition, groupings are emailed to the rounding physician by 7:00 am, and the discharge NP reviews the list prior to rounds in order to improve efficiency. Rutherford expects the team to refine the groupings again when the CMU moves into its permanent location.

By late November, the average rounding time per patient had dropped to 8 minutes and 39 seconds. There is a small amount of buffer built into rounding times, which helps the group adhere to its targeted takt time if they confront social/communication challenges with a patient. "We have sustained [results] for over a month now without much variation," says Rutherford. "The complexity of the patient has varied while we've been open — some medical, some intermediate, some psychosocial, etc. — but we've still maintained our standard work and have been able to execute on our plan. That gives me confidence the process is sustainable… To be able to see 20 patients in two hours and have a concise plan of care for them, I think we're happy with that."

In addition to standardizing rounding procedures and decreasing rounding times, the changes made by the improvement team have led to improved quality outcomes for patients, physicians, and staff. "Physicians have expressed high satisfaction with rounding," notes Rutherford. "The doctors tell me often that they are finished with their notes two to three hours earlier than they would have been any other time, and they have a better home life because they're not getting calls in the middle of the night or after they leave their shifts." The physicians also have fewer phone interruptions: the bedside nurse feeds questions to the charge nurse, who then compiles the questions and communicates them with the physician. And although consulting physicians are not part of the new rounding process, the heightened awareness of rounding times has increased communication between rounding physician and consulting physicians.

Patients have been able to articulate when they expect to see their physicians during rounding, which helps them to arrange for family to be present. "If family is not available, the nurse is able to provide the update and only request the return of the physician if there's questions that the nurse is unable to answer, but that doesn't happen very often," says Rutherford.

RNs are aware of the plan of care in a seamless fashion, and this has helped to reduce interruptions to bedside RN care. RN satisfaction also has increased with trialing of a new nursing model in the CMU. The model is still being defined, but one successful aspect has been the role of the CCN. This role is differentiated from the bedside nurse, incorporates more care management and social work, and emphasizes transition of care rather than dealing solely with daily issues. "They work closely with case management and social workers if there is a true barrier to discharge, like a need for home medical equipment." Patients also are appreciative of the new nursing model and the communication provided by these caregivers.

The improvement team is implementing a simple rounding checklist that serves as a reminder to rounding staff, identifying what is to occur outside of the room (e.g., identify changes to the patient that have

occurred overnight, discharge barriers) and in the room with patients and family (e.g., sit down with the patient, touch base with the patient).

When the CMU moves to its permanent space, staff also will receive some assistance for communication, coordination, and prioritization of work, says Rutherford. For example, MDHs will take place in a location with electronic boards that show patient lists, and the list can be filtered by discharge date and other characteristics. Each patient room will include a board that identifies the five most important steps necessary for a patient to be discharged.

CMU staff are proud of the rounding results, Riverside's Medical Executive Committee is interested in the outcomes, and the team will begin to share findings with others at Riverside units. One key learning at AEH, notes Rutherford, is how to expand a practice to other areas. "We're trying to lateralize what we can, but we also want to take our time to make sure we're solving the correct problem [on other units]."

As CMU shares rounding methods and other best practices that emerge, staff expect leadership support to continue, says Rutherford. "It has been a full collaboration. It has been an opportunity for everybody to recognize and acknowledge that we need to take risks and that we need to be innovative. The way that we've been doing things has been OK, but it's not what's going to propel us in the future." He says CMU has not met barriers that likely exist elsewhere — e.g., financial, technology — and that leadership has accepted the unit's business case and recognized how its work and processes align with OhioHealth strategy.

AEH Commentary

The Riverside CMU project illustrates the importance of physician engagement when attempting to improve hospital operational issues, especially when the physicians are the cornerstone participants, as is the case with rounding practices. Operational metrics, such as throughput and patient satisfaction, will help an improvement initiative to get the attention of physicians to a problem and get their buy-in.

The rounding project also shows that standardization is critical to "bridge the gap between medicine and operations," says Rutherford. Standardization establishes a common language and approach for work and helps staff collectively and collaboratively pursue goals. As with most lean concepts, standardization can make work easier, remove unnecessary decision-making for actions that should be routine, and free up scarce resources and time for staff to add value to the patient experience. Standardization with rounding also helped patients and their families anticipate their discharges, and, thus, improved patient satisfaction.

The training at AEH led to improved rounding practices at CMU, and tools such as mapping, gemba observations, and A3 thinking have given CMU staff the capabilities to tackle new problems when they arise. It also gives physicians and staff the confidence to push the boundaries of what they hope to achieve, and innovate new ways of healthcare that can be shared within Riverside and across OhioHealth.

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.

Improve Physician Rounding with Comprehensive Medical Unit

- David Rutherford
  Director of Nursing
  OhioHealth Riverside Methodist Hospital
  614-581-5452
  david.rutherford@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