ACADEMY FOR EXCELLENCE IN HEALTHCARE

IMPACT ASSESSMENT PAPER

Executive Summary

Reducing Readmission at Murray-Calloway County Hospital

Murray-Calloway County Hospital (MCCH) is a non-profit healthcare provider in Murray, KY, that treats acute illnesses and chronic diseases. MCCH includes 128 acute-care beds, 12 acute-inpatient rehab beds, and 200 long-term care beds. The hospital is staffed with 1,079 employees, including 75 physicians representing 26 medical specialties (e.g., pediatrics, obstetrics, outpatient/inpatient surgeries).

In 2015, MCCH lost $1.2 million due to readmissions, the equivalent of a 3 percent raise in staff wages. Medical staff had been aware of the problem, but it was not an active priority for the organization. With CMS reimbursements in part dependent on readmission rates and commercial insurers likely to adopt similar reimbursement criteria, the need to reduce readmissions at MCCH became more urgent.

MCCH formed a cross-functional improvement team, and members attended lean training at the Academy for Excellence in Healthcare (AEH) at The Ohio State University in June 2016. The team initially scoped their project at AEH to reduce the overall readmission rate in the hospital's 4 South facility (medical floor) by 50 percent within 90 days. Upon reviewing risk-adjusted 30-day readmission data, June 2015 to May 2016, the team recognized data driven by unique conditions: of the top four diagnoses related to readmissions, diabetes appeared to be a major concern, but the data was based on three patients, one of whom had been readmitted 16 times. Expanding data analysis to the top eight diagnoses also revealed an outlier for gastrointestinal bleed (one patient with multiple readmissions).

The team revised their project's scope to focus on three related diagnostic-related groups (DRGs) that were significantly impacting reimbursement dollars: 190 (chronic obstructive pulmonary disease), 193 (simple pneumonia with or without pleurisy pain), and 194 (simple pneumonia with complications). The readmission rate for the DRGs was 20.9 percent in June 2016. They accounted for 6 percent of MCCH total readmissions and 59 percent of the top five readmissions by DRG. The three DRGs also represented patients who received care primarily on 4 South.

The team reviewed data for the DRGs and noted that the readmission length of stay (LOS) *surpassed* the initial admission LOS, and both initial and readmission LOS were longer than the expected LOS. They studied data by physician and by the three physician groups involved, and found little variation. The team also observed and spoke with staff, where they learned that staff were not aware of the volume, frequency, and associated costs of the readmission problem. The team interviewed patients that had been

readmitted and discovered that many were not educated about their conditions and medications prior to discharge; a chart review found that 47 percent of 4 South patients had *no teaching documentation*.

Use of Five Whys analysis by the improvement team drilled down to probable causes related to teaching documentation: nurses thought others were doing daily teaching and discharge teaching (and vice versa); various disciplines had different teaching-documentation processes; teaching materials were in multiple locations; and documentation of teaching was perceived as redundant. The team also mapped the process leading up to discharge, and conducted failure mode effect and criticality analysis (FMECA) to identify the likelihood, effect, and severity of problems (e.g., language barrier with discharge information). Their overall assessment revealed a teaching process fraught with workarounds and lacking standardization.

The team established a goal to reduce the percentage of 30-day readmissions for the three DRGs on 4 South by 20 percent by Oct. 31, 2016, and proposed, planned, and began to implement countermeasures based on cost/effort analysis; some countermeasures could lead to quick results with minimal effort, while others would extend and expand the improvement project:

- *Improve interdisciplinary communications:* Development of daily interdisciplinary huddles — involving the charge nurse, case management, social services, dietician, respiratory, and physical therapy — would improve the visibility of teaching topics and educate staff regarding teaching documentation. A hospitalist was eventually added to the huddles.
- *Increase patient education:* Standardized procedures for educating patients were implemented immediately when the problem was identified. In addition, a pharmacist intern helped the team identify gaps in patient education specific to medications. The team planned to expand the medication education component with an additional improvement project.
- *Increase pulmonary rehab referrals:* The director of cardiopulmonary reviewed the readmission data and found that 40 percent of COPD readmissions could have benefitted from pulmonary rehab. This countermeasure will require approval from the Medical Executive Committee and research on reimbursements.
- *Understand patient needs:* Case management will conduct early interventions to correctly identify patient post-discharge needs.
- *Post-discharge communication with patients:* Paramedics will conduct follow-up patient interviews at 72 hours. Any patient issues identified are relayed to a triage nurse, who contacts physicians and arranges appointments.

Readmissions for 4 South for the three DRGs fell to 9.1 percent in August and 14.0 percent in October, despite increased patient volumes. The team plans to continue monitoring readmissions with the help of a re-established multidisciplinary readmission committee, will submit monthly data to the KY Health Enrichment Network for benchmarking, and regularly review Press Ganey and HCAHPS results.

About the Academy for Excellence in Healthcare: AEH 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. To learn more about AEH, contact Margaret Pennington, Faculty Director, or Beth Miller, Program Director. To learn more about the project at MCCH, contact Gary Harper, DNP, RN, or Mary Sue Hubbard, RN, CPHQ.