

ACADEMY FOR EXCELLENCE IN HEALTHCARE

IMPACT ASSESSMENT PAPER

Executive Summary

Six Sigma Lean Fall Project at Mercy Health Clermont

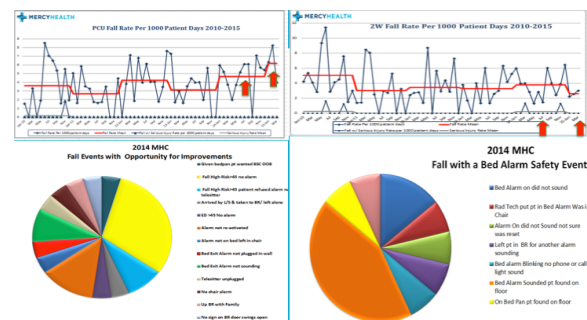
Mercy Health Clermont (MHC) near Cincinnati, Ohio, has always had patient safety and preventable harm as its top priority. The hospital closely monitors patient falls on a daily basis and investigates every occurrence using post-fall huddles and a hospitalwide daily safety call. The hospital's fall rate increased by 14 percent from 76 to 91 in 2014, including its first two serious reportable events since March 2011. This prompted MHC to strengthen its existing fall-prevention practices, which included universal fall-prevention interventions (e.g., use of nonskid footwear, intentional rounding for toileting); a fall-risk assessment of each patient with a plan of care for their safety; and use of an ongoing fall task force.

To further address the problem, MHC formed a crossfunctional improvement team that included disciplines associated with patient interaction and safety (quality, safety, rehab, and environmental services). The team attended training at the Academy for Excellence in Healthcare (AEH) at The Ohio State University, where they advanced their understanding of lean and six sigma tools, including the DMAIC (design, measure, analyze, improve, and control) process, care mapping, and data analysis.

The improvement team worked in coordination with the fall task force, identified procedures and policies in place to prevent falls, and assessed if all staff knew and consistently followed MHC policies. They analyzed and charted patient falls and causes, conducted FMEA (failure mode effects analysis) on processes and sub-processes related to falls, and found three primary groups of problems:

- *Policies and procedures:* Individuals did not know the fall-prevention requirements or believed they did not know how to act on them.
- *Alarm management:* Alarms malfunctioning, not activated or reactivated, or incorrectly hooked up; staff alarm fatigue/uncertainty; nurses not properly assigned into the system to receive routed alarms; and patients refused alarms.

Fall and Bed Alarm Control Charts and Data



Source: Mercy Health Clermont

- *Pre-fall care delivery and prevention:* Patient’s fall risk incorrectly assessed, fall risk not reassessed (every 12 hours), staff unaware of fall-risk assessment, and staff unaware of a patient’s injury risk.

The improvement team quickly enacted two countermeasures: incorporated an alert in the Epic system to immediately identify high fall risk, and required physical and occupational therapists to clearly write a patient’s mobility needs on a whiteboard in each room. They also began work on longer-term efforts to ensure everyone knew and followed standard practices. With input from frontline staff, managers, the fall task force, and others, the team developed a fall-risk tip sheet to “hard wire” policies and procedures and alarm management, and established standardized activities when treating fall-risk patients. The team also developed a rolling action-item list that tracked falls by cause (e.g., staff unaware of fall risk), individual/group responsible, action/deliverable, and a means to track progress. After the countermeasures were in place, the team audited adherence to the new procedures and found substantial progress.

Despite the quick wins, the team still recognized a need to pursue broader, cultural solutions:

- *No Pass Zone:* This program is intended to drive proactive and rapid responsive to any patient need by any employee (nurse, physicians, maintenance, etc.). The *No Pass Zone* program includes a *Stop the Fall Challenge* initiative to reduce patient falls related to toileting assistance by improving staff response times (as much as half of all falls are related to toileting needs).
- *Pod-Nursing Pilot Program:* A pod-nursing program was trialed in med/surge that reorganizes how registered nurses (RNs) and PCAs work together. PCAs will work regularly with the same two nurses rather than four or five nurses, which should improve communications and accountability. The team got support for the change by presenting a cost-benefit analysis to administration: addition of a PCA vs. costs related to falls (e.g., costs for extended patient stays, cost for procedures and testing). Initial results have been positive, and the program may be expanded to other areas and MHC sister hospitals.

The improvement team eventually merged its activities and some members into the fall task force, which will monitor all fall events, fall reductions, process improvement, and compliance. The fall task force also will conduct audits and gemba walks, and analyze the results of what has occurred during each month.

[Read the full study of the Six Sigma Lean Fall Project project](#), which underscores the need for all personnel and many approaches to reduce falls. The project illustrates the need to regularly analyze a current situation with new eyes, which can lead to short-term countermeasures that quickly deliver results as well as innovative longer-term programs deployed to address root causes and change workforce culture and frontline behaviors. The MHC improvement team followed two critical practices that help any healthcare improvement initiative: establish means to continuously reinforce best practices and routinely monitor progress toward key performance indicators.

[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.