Effects of Interdepartmental Culture Change on Throughput and Patient Experience

Leaming JM, Knauss EA, Griffie NK, Greene JJ

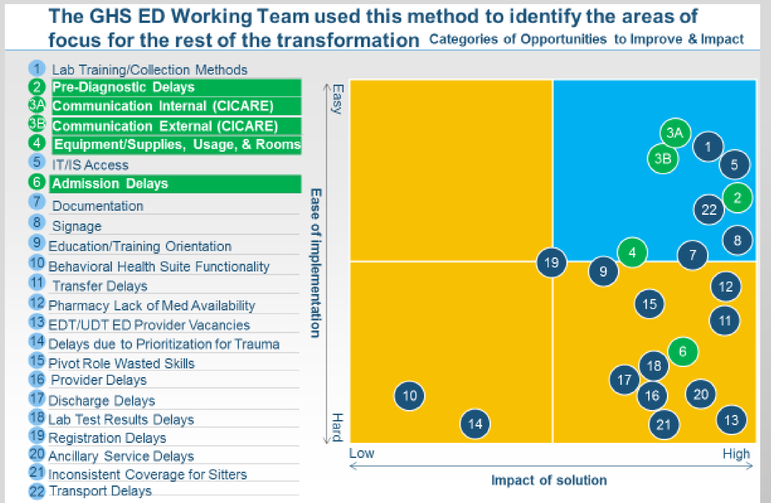
INTRODUCTION

Lean is a way to counteract the common, top-down, command-and-control approach to management. Instead of relying on directives from management, lean seeks to take advantage of the intelligence an organization has on the frontlines; the employees who are engaging in the organization's processes every day. Employees are empowered to define and then continuously refine processes.

INNOVATION

We enlisted experts in operational effectiveness and service excellence, and both leaders and front line staff were trained on the lean principles. Over the next 12 months, the team embraced change, looking to improve value and reduce waste at every step along the patient journey, from arrival to disposition. We identified key stakeholders: front line staff including physicians, nurses, physician assistants, technicians, laboratory, radiology, inpatient service representatives, and registration and administrative personnel, who formed work teams dedicated to rapid redesign. During rapid-improvement events, teams mapped processes to aid in identifying cause and effects of waste. Teams conducted dozens of tabletop and live walk through trials of new pathways and innovations with ideas succeeding and failing in equal numbers. Standard work processes designed to ensure reproducible, predictable outcomes and minimize variation were defined collaboratively.

Initial focus was toward improving processes around delivery of care such as location and storage improvement for equipment and supplies, decrease in pre-diagnostic delays and decrease in admission delays. After initial successes in delivery of care process changes generated excitement and some increased accountability, the interdepartmental group moved focus toward selected processes that focused on the ordering of care with development of ED provider standard workflow discussions.



There were opportunities that included documentation improvements, integration of scribes in the ED and greater utilization of order sets and pathways for management of patients. As these identified opportunities necessitated care management consensus around best practices for patients, there were limitations to lean process change in innovating improved treatment guidelines and protocols. However, the greater involvement of clinicians created surprising change sustainment and a greater understanding of the ability to create non-stop improvements rather than "spot fixes" to respond to the future uncertainty and increasing complexity of the ED care environment.

RESULTS

We began to see improvements almost immediately, around delivery of care in areas such as location and storage improvement for equipment and supplies, decrease in pre-diagnostic delays and decrease in admission delays and the results have been largely sustained. From a baseline of 23 minutes in FY17, the mean arrival to roomed time has declined to 18 minutes in FY18, with more than half of our patients in a room within 7 minutes of arrival. Walkouts have declined by more than 65%, from an average of 3.2% per month to less than 1.1%.

Our patient satisfaction scores have risen from the lowest quartile to as high as the 92nd percentile. ED volume has increased by over 2,200 patients which represented the first growth of the ED in 4 years. Through the implementation of this project there were decreases in the arrival-to-admission order interval for emergency department patients by 108 minutes. Overall there was a 12000-hour yearly impact in hours saved for patients from arrival to departure (admission or discharge) as a result of the rapid cycle improvements made through these process improvement project. As front line staff became more empowered and invested in process improvement, we noted dramatic improvements in recruitment for physicians and APs as well as a dramatic decrease in nursing vacancy and improved nursing retention.

LESSONS LEARNED

By establishing an expectation that unit and department care teams will identify key process variables, measure them, report the results widely, and improve them as needed, collaborative efforts beyond the emergency department can effect throughput and patient experience metrics. This may require structure and culture modifications along the power/authority continuum from centralization to decentralization and striking a balance between regulatory/accrediting requirement.