

Standardizing the Admission Process Using Lean/Six Sigma

“One Piece Flow”

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Background:

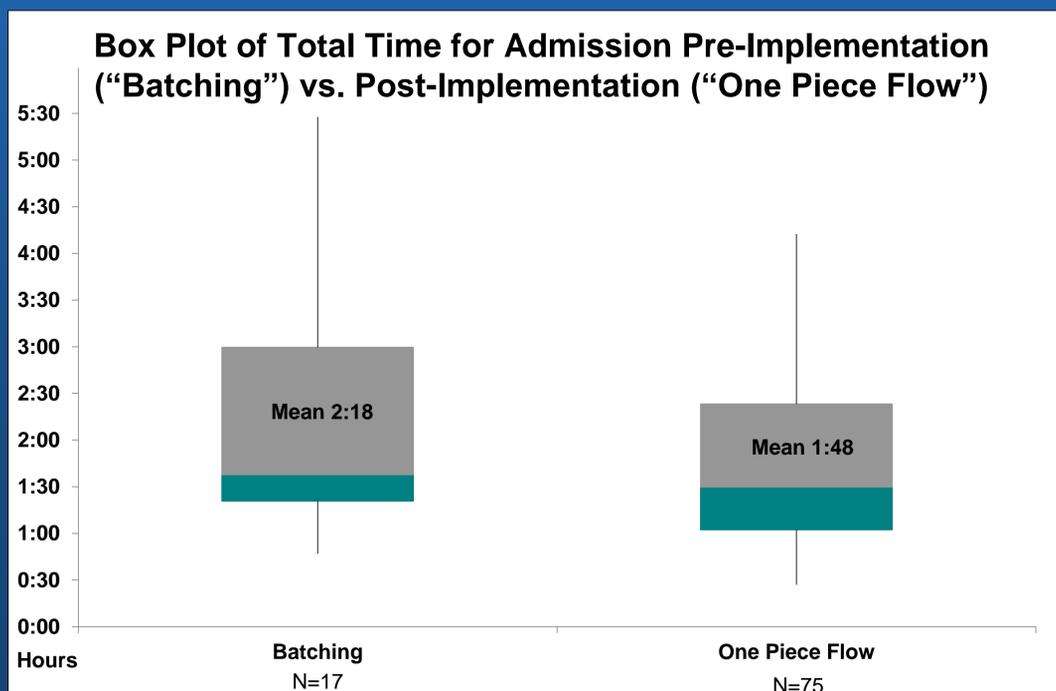
- Lean/Six Sigma methodology was developed in the automotive industry, but is increasing being applied to quality improvement in healthcare.
- A basic tenet of Lean/Six Sigma is that processes are most efficient and less prone to error when completed from start to finish without interruption, termed “one-piece-flow,” (OPF) as contrasted with performing individual parts of a process in groups, termed “batching.”
- Our hospitalist group admits approximately 400 patients per month, but had no standardized approach to the admissions process.
- Many physicians in group tended to “batch” admissions, seeing two or three patients sequentially, followed by order entry, then documentation.

Purpose:

- To standardize and improve the admission process by implementing a “one-piece-flow” technique for patient admissions.

Design:

- Select hospitalist providers committed to performing patient admissions in OPF, whereby an admitter focused on one patient from initiation of chart review through exam, order entry and documentation, without interruption.
- Pages and other distractions were addressed only at the completion of this process, unless emergent.
- We recorded the time each admission page was received from the emergency department (ED), time of call back to ED, time at initiation of chart review, time of evaluation of patient, time admission orders were placed, time of H&P completion, and time of sign-out note completion, before and after implementation of OPF.
- Pre-intervention data were collected from 11/14/15 - 12/14/15.
- Post-intervention data were collected at 30, 90 and 180 days.
- The mean number of admissions during the study was 7.5 per shift



Conclusions:

- Implementation of OPF technique for hospital admissions was associated with a sustained and clinically meaningful decrease in time for the admission process.
- These results may have significant implications for hospitals seeking to improve the efficiency of their admissions process.
- Further study is needed to determine whether OPF techniques also result in fewer errors during the admissions process.