

# ACADEMY FOR EXCELLENCE IN HEALTHCARE

## IMPACT ASSESSMENT PAPER

### Executive Summary

#### Emergency Department Flow: Reducing Length of Stay for Lower-Acuity ED Patients

The emergency department (ED) at Nationwide Children's Hospital (NCH) was experiencing higher than acceptable length of stay for lower acuity patients — despite moving into new space in 2012, increasing overall ED capacity, and reconfiguring the ED with 20 beds allocated for lower-acuity patients. A correlation between patient satisfaction scores and length of stay (LOS) indicated the impact of the ED problem: patient-satisfaction scores were 67.6 percent when ED LOS times exceeded 120 minutes, and 86.1 percent when LOS times were 120 minutes or fewer, according to Press Ganey data. From November 2013 through October 2014, only 51 percent of lower-acuity patients were discharged in 120 minutes or fewer.

A cross-functional improvement team from NCH trained at the Academy for Excellence in Healthcare (AEH) at The Ohio State University. Training exposed the group to lean principles that could be used to address the LOS problem and helped them to recognize inefficient current practices, such as batching of lower-acuity patients prior to assigning them rooms. The team used value-stream mapping at AEH to examine the flow of lower-acuity patients through the ED process:

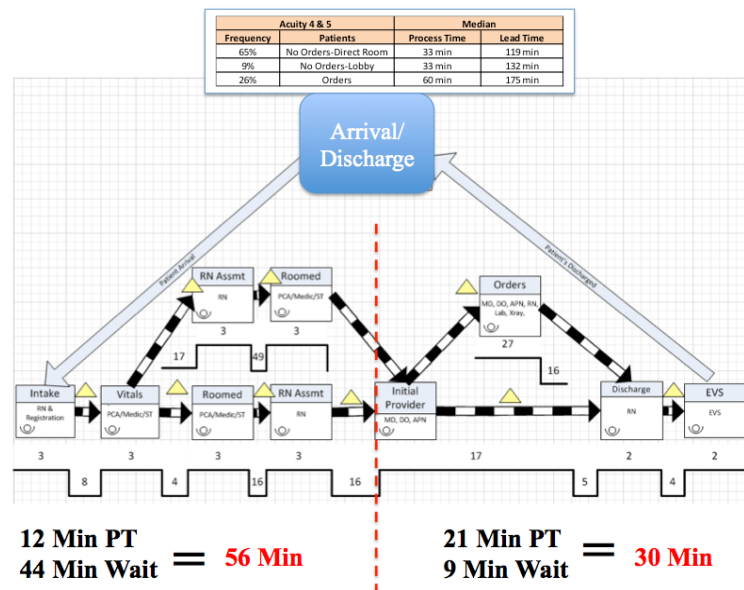
- *Prior to provider:* 12 minutes of patient-care time and 44 minutes of patient-wait time for the four process steps of registration, vitals, roomed, and RN assessment.
- *With provider:* 21 minutes of patient-care time and 9 minutes of wait time for the three process steps of initial provider, discharge, and environmental services (EVS).
- *Secondary patient flows:* RN assessment prior to having a patient roomed and/or patient orders.

The mapping surfaced ED problems that the team analyzed using fishbone diagrams and segregated into four general causes: process, staffing, orders, and miscellaneous. The team then identified root causes for the four groups (for example, process root causes were batching, lack of standard work, and poor communications) and explored solutions that could decrease lower-acuity LOS without negatively

impacting care of higher-acuity patients. Focus groups with ED staff (PCAs, providers, nurses, nurse practitioners, etc.) and ongoing interdisciplinary monthly meetings were used to engage ED staff in the improvement project.

The improvement team established LOS goals of 65 percent of lower-acuity patients discharged in 120 minutes or fewer by March 2015, and 80 percent discharged by July 2015. In March the ED goal had not yet been reached — higher censuses, higher behavioral health patients, and higher boarding of patients challenged the team’s progress — but process improvements were taking hold: the project engaged staff in addressing the LOS problem and improved ED teamwork, communication, and focus on patient flow. Team members believe standardized work and ongoing dialogue and feedback will move the ED toward its goals, and help the team transfer best practices across the ED.

### ED Lower-Acuity Flow Map



Source: Nationwide Children’s Hospital

[Read the full study of the Emergency Department Flow project](#), which illustrates the challenges of improving one process (lower-acuity care) that shares resources in a larger system (overall ED). The project also shows a best practice for improving any process — getting regular input and feedback from those intimately familiar with the process. In focus groups and monthly meetings, the improvement team gained valuable insights from staff, identified problems and opportunities, and identified leaders who could help them to establish standardized work and build cultural buyin for necessary changes.

[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.