

Crouse Hospital Emergency Department
Patient Immobilization Project

Lean Six Sigma Green Belt Training with
Crouse Hospital, Central NY EMS and Welch Allyn in Syracuse, NY

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Background

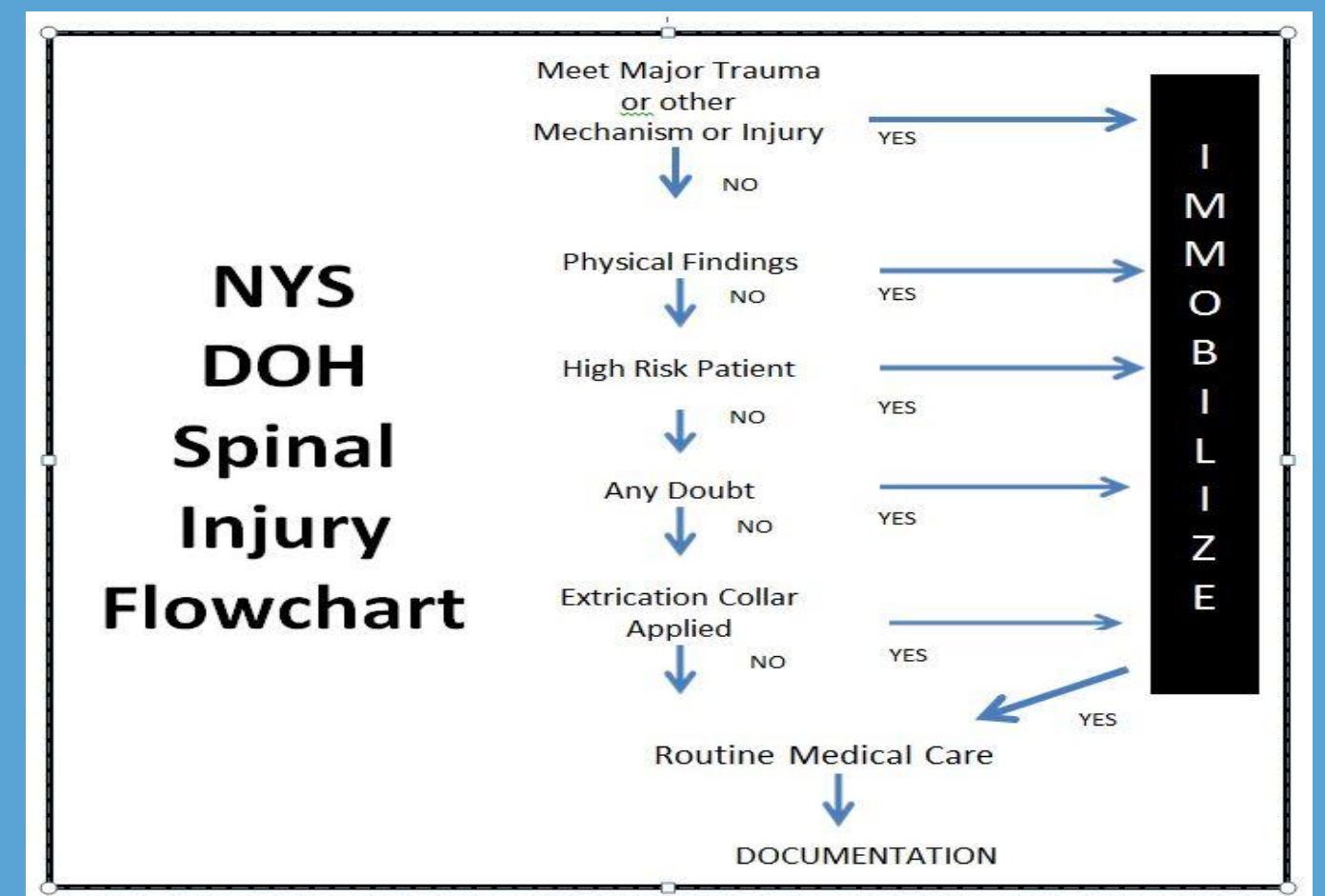
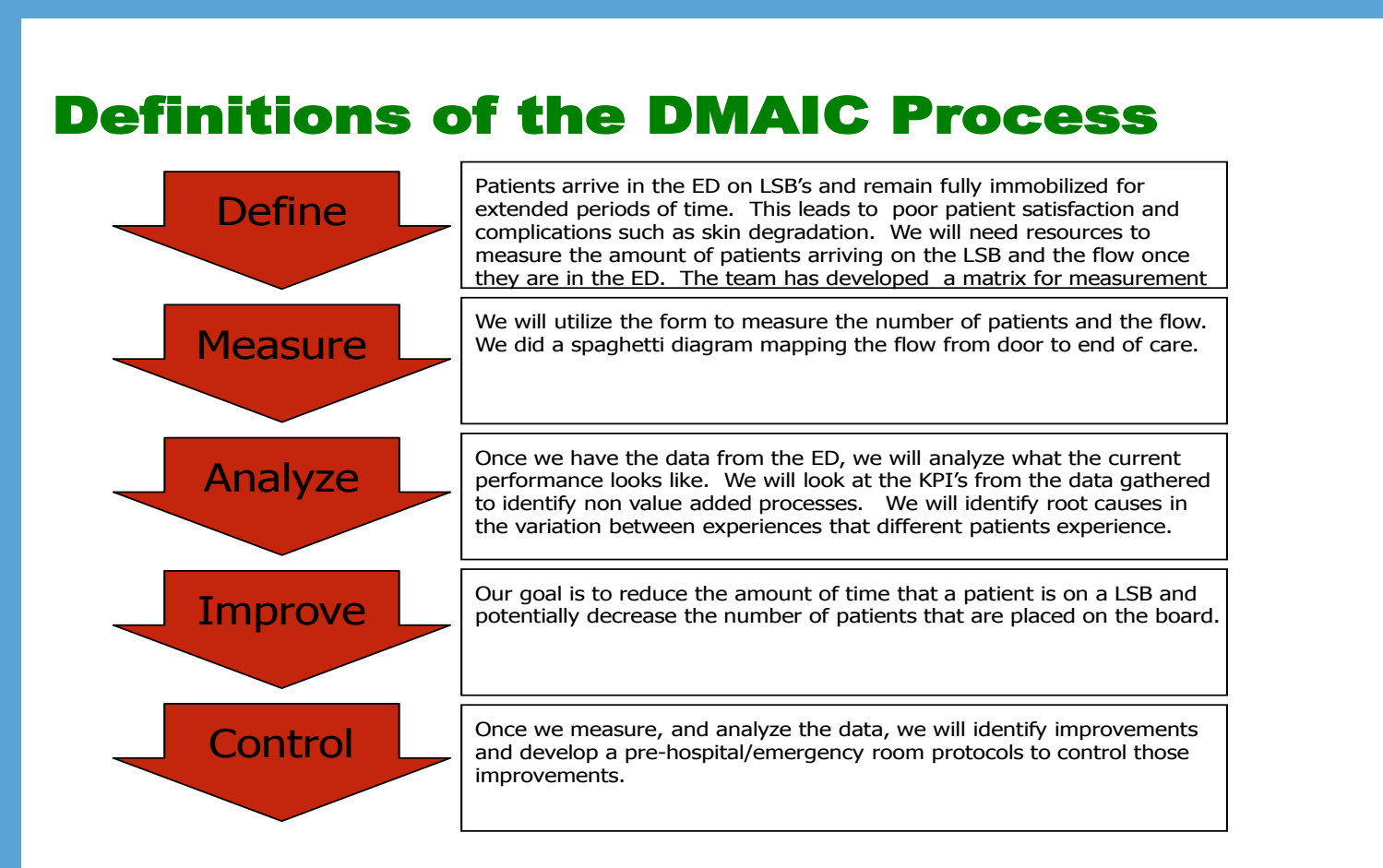
Patients fully immobilized on a long spine board (LSB) and cervical collar suffer adverse effects that may exceed the risk of the original injury. Pre-hospital treatment of suspected spinal injuries is driven by extensive NYS Emergency Medical protocols, and immobilization equipment has seen little change in decades. Fully immobilized patients arriving at the Emergency Department (ED) place additional diagnostic, logistics, and patient care stresses on an already burdened ED system, driving up health care costs and reducing patient satisfaction.

Pre-hospital Emergency Medical Service (EMS) providers in New York State are mandated to follow the NYS Basic Emergency Medical Technician protocol regarding spinal immobilization. Placement on a LSB is not a risk-free process. Immobilization increases a patient’s pain, anxiety, and risk for aspiration. It can also lead to the development of skin breakdown and other complications. The longer a patient spends immobilized, the greater their risk of complications.

Project Goal

The project goal is to reduce the amount of time that a patient spends on a LSB and decrease the number of patients placed on the board.

Method



Results

The implementation of a new LSB protocol developed during a large scale Lean Six Sigma Greenbelt project has reduced by 79% the time patients spend immobilized on a LSB. Efforts are underway to further decrease this time.

Conclusions

The new protocol is a win for EMS providers, the ED nursing staff and, most importantly, patients. It has strengthened the collaboration between EMS providers and ED staff. This project was initiated within RIT’s Lean Six Sigma Greenbelt program delivered to the ED Leadership and Operations group and then translated to the ED Clinical Council for implementation.

The project was awarded “best presentation” at the New York State ACEP Scientific Assembly in 2014, and will be presented at the Annual Symposium of the National Association of EMS Physicians in January, 2015.

The Crouse Hospital ED Department has been contacted by other hospitals in Central NY to help implement this process within their hospitals.