

# Reducing Length of Stay in BMT Patients

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UC San Diego Health System

## Overview

To complete my Lean Six Sigma Black Belt, I led a process improvement project to reduce length of stay in admitted Bone Marrow Transplant patients.

## Problem

The BMT patient population was identified as an opportunity under a larger organizational length of stay reduction project. The BMT patient population consists of patients admitted for chemotherapy and patients undergoing stem cell transplants. The average observed vs expected (O/E) Length of Stay ratio was 1.33 for BMT patients in 2016. This was one of the highest O/E ratios among the service lines. The goal for this service line and the organization was to reduce LOS O/E to 0.95 or less.

## Process

The entire project was managed and supported utilizing the Lean Six Sigma methodology. Tools used included value stream mapping, SIPOC, Process mapping, Kaizen events, Design of Experiments, and Control Charts/Plans.

I acted as the project manager and worked mainly with Physician, Physician Assistant, and Nursing leadership for the patient population. Meetings were held throughout the project to engage the frontline workers in the problem identification and solving exercises. Education and training was also offered to teach stakeholders about various LSS tools.

In addition to project management responsibilities, I carried out the data analysis required to help support problem identification and solutions. I also created and managed the dashboards used to measure the KPIs throughout the project lifecycle and after.

The project resulted in a final presentation to fellow LSS classmates and stakeholders and leaders from the UCSD health system. I also received my Lean Six Sigma Black Belt certificate from the UCSD Extension program.

## Solution

1. A new bed holding process for planned chemotherapy admissions was created and implemented.
2. Daily Discharge Planning was implemented by frontline nurses for patients undergoing stem cell transplants.
3. Improved communication between inpatient and outpatient clinical staff to handle admissions and post discharge follow up.
4. Education and training resources for case managers to aid in discharge roles with the patient population.
5. These four main interventions led to a decrease in ALOS from 12.9 to 11.6 and the ALOS O/E from 1.33 to 1.04.