

Application of Lean/Six-Sigma to Optimize the Trauma Bay

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INTRODUCTION

SSM Health Cardinal Glennon Children's Hospital is a Pediatric Level 1 Trauma Center. The Emergency Department cared for 477 trauma activated patients in 2017 and 518 in 2018. The Emergency Department has 35 beds with 4 Trauma Bays. Each day, nurses spend approximately 1 hour stocking trauma rooms, resulting in them being away from the patient bedside. Through this stocking process, the rooms were frequently overstocked which resulted in items expiring before use, nurses needing to "de-stock" the rooms, as well as difficulty finding the appropriate item. The rooms were not set up in a fashion that items were easy to find if one was unfamiliar with the room. A committee was formed to look at the set up and par level of the rooms utilizing Lean/Six Sigma Guidelines.

PURPOSE

To optimize supply level and organization of the Trauma Bay as well as increase available amount of time the RN has to be at the patient's bedside

METHODS

The committee met in January of 2018 to determine the current state of the trauma rooms. The committee consisted of a Clinical Support Nurse, bedside RN, Paramedic, Team Leader, and Department Coordinator. As a group, we decided our main goals were to reduce motion waste, reduce inventory waste, and reduce the amount of time nurses spent stocking the room away from the bedside. After evaluating current state, ideal state was created by the committee focusing on optimizing par levels and increasing visual management in the room. In June of 2018, the first trauma room was transitioned to the proposed layout and par levels and trialed for one month. Feedback was gathered from staff and changes were made accordingly. The other three rooms were then transitioned over a period of 6 weeks.



RESULTS

Initial upfront savings were \$3,000 for the four trauma bays as a result of leveling down par levels and removing non-emergent supplies. In July of 2018, the Emergency Department was \$20,000 below budget. In total, from July to November of 2018, the department was \$70,000 below supply budget. Nurses are spending approximately 30 minutes less a day stocking the trauma rooms. Nurses are more comfortable and more efficient with gathering supplies.

CONCLUSIONS

Based upon the cost savings and feedback from staff, the trauma room "refresh" has been a success so far. Staff have stated they are more comfortable as a result of the increased visual management. The cost savings has been significant for the department.

FUTURE PLANS

Continue to reevaluate efficiency and set up of room by seeking feedback from staff members. Make changes accordingly. Continue to evaluate par levels to ensure adequate stocking and cost saving measures.

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