Rapid Recovery Pathway Following Spinal Fusion for Idiopathic Scoliosis: A Quality Report

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INTRODUCTION

- Posterior spinal fusion (PSF) for adolescent idiopathic scoliosis (AIS) is associated with pain and prolonged hospitalization1.
- Early mobilization can accelerate functional recovery and reduce length of stay (LOS)2.

METHODS

We designed and implemented a standardized rapid recovery pathway (RRP) with evidence-based management3,4 recommendations for children aged 10 to 21 years undergoing PSF for AIS (Fig 1). Our primary outcome, functional recovery, was assessed using statistical process control charts for LOS and average daily pain scores. Our process measures were medication adherence and order set utilization. Balancing measure was 30-day readmission rate.

RESULTS

- Cohort included 322 patients from 1/1/11 to 6/30/15: 134 (42%) historical controls, 104 (32%) transition population and 84 (26%) RRP population
- Average LOS decreased 5.7 to 4 days with RRP use (Fig. 2)
- Average daily pain scores were improved on postoperative day 0 (3.8 vs 4.9) and 1 (3.8 vs 5) with RRP use (Fig. 3)

DISCUSSION

- Readmission rates 2.9% (7/238) vs 3.6% (3/84) did not increase as a result of this pathway.
- Despite introducing early rehabilitation we did not observe an increase in self-reported pain scores.
- Self-reported pain scores represent both an outcome and a balancing measure.
- It seems unlikely that we would have been able to make this early transition to PT without the successful implementation of our multimodal analgesic regimen.

CONCLUSION

- Implementation of a standardized RRP resulted in reduced LOS without an increase in reported pain scores or readmissions.

REFERENCE