Introduction:
The concept of Perioperative Surgical Home has been gaining significant attention in surgical centers. Its model is delivering and improving coordinated care in a cost-effective manner to patients undergoing surgical procedures. It starts with the decision for surgical intervention and continues to the intraoperative and postoperative period into long-term recovery. Constant reevaluation of outcomes and modifications of delivery provides a feedback loop for improvement. Children’s Hospital of Los Angeles initiated a new protocol in June 2014 to manage children undergoing Posterior Spinal Fusion, with the goal to improve patient experience and lower the hospital length of stay and cost.

Methods:
A retrospective chart review identified patients undergoing Posterior Spinal Fusion for idiopathic scoliosis before and after initiation of the protocol. The protocol was developed in a multi-disciplinary team of anesthesiology, orthopedics, and nursing and physical therapy (Table 1). In addition to demographics, we examined length of stay, cost of hospitalization, pain scores on discharge, length of Patient Controlled Analgesia (PCA) usage, time to first solid food intake and time to ambulation.

Results:
Thirty-six patients were identified pre- and post-initiation of protocol (Total n=72). There was no statistically significant difference in age, sex, use of intrathecal morphine or estimated blood loss. Post-initiation patients did have higher ASA classification (p=0.003) (Table 3). Pain scores were higher in the post-initiation group at the time of discharge although the difference was not statistically significant (Table 4). Length of stay was significantly shorter in the post-initiation group (Fig 1, p=0.004), accounting for $282,560 in cost-savings for the hospital. Patients post-initiation had significantly lower duration of PCA usage, time to first solid food intake and time to ambulation (p<0.001).

Discussion:
This data shows that the initiation of the institution’s Posterior Spinal Fusion Protocol significantly decreased the total length of stay and cost of hospitalization without altering pain scores on day of discharge.

References:

Table 1. Protocol Comparison

Table 2. Length of Stay

Table 3. Demographics

Table 4. Pain Scores

Fig 1: Length of Stay