

Project Title: Building Optimal Surgical Resources in the Children's Hospital

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Mentors and Collaborators: Kenneth Polonsky, Jeffrey Matthews, John Cunningham, Karen Stratton, Vikram Acharya

Background, Challenge or Opportunity: The American College of Surgeons (ACS) has proposed to formally verify levels of surgical care for children, analogous to the ACS designations for trauma care. Children's hospitals are thus presented with an opportunity to evaluate the environment of care provided for surgery in their institutions, with comparison to a robust set of national standards.

Purpose/Objectives : The purpose of this project is, first, to understand how the current environment for the surgical care of children at the University of Chicago relates to the national guidelines developed by the ACS. Second, we will use this understanding to identify opportunities for optimization, with the ultimate aim of achieving a Level 1 (top level) designation.

Methods/Approach: An initial analysis of the surgical environment in our Comer Children's Hospital was performed, using the framework of the Optimal Resources for Children's Surgical Care as a guide. Areas of divergence were identified, and evaluated for significance. Opportunities for improvement were assessed for feasibility and impact, and strategies to address these were developed with relevant partners within the institution.

Outcomes and Evaluation Strategy: Optimal surgical care for children depends both on internal processes (which drive multidisciplinary process improvement and innovation) and external relationships (which contribute volume and complexity of care). In analyzing internal processes, we initially identified two feasible, high-impact areas for initial improvement: perioperative planning for the pediatric operating rooms, and provision of surgical critical care services. Analysis of pediatric perioperative services led to a revised structure for OR governance, with a more inclusive OR committee meeting attended by all care disciplines, nursing leadership, and administrators with budgetary authority; a new OR quality committee, providing a forum for OR nursing concerns; and increased access to the specialized OR environment during off-hours for non-ICU patients. Analysis of pediatric surgical critical care services led us to assess our extracorporeal membrane oxygenation (ECMO) program. In response, we initiated training schedules, certification, and a multidisciplinary ECMO quality council; these steps additionally led to our certification as a Center of Excellence by the Extracorporeal Life Support Organization. Objective measures of ECMO performance improved in a statistically significant manner. Similarly, we identified a faculty member as the Director of Pediatric Surgical Critical Care as a resource for pediatric critical care partners, and initiated formation of an ACGME-approved surgical critical care fellowship.

Another important metric for children's surgical care is case volume, which supports proficiency in complex surgical care. In concert with the Department of Pediatrics, we increased access to pediatric surgical consultation by establishing daily clinics and a "just say yes" policy, reducing wait times for clinic visits to minimum values. We also began to track cases referred from hospitals with whom we have pediatric surgical coverage arrangements, and noted a significant contribution of complex cases to our hospital from these relationships. As part of a multidisciplinary University of Chicago pediatric team, we established clinics in two new geographic areas. Collectively, these steps led to an objective increase in wRVU performance.

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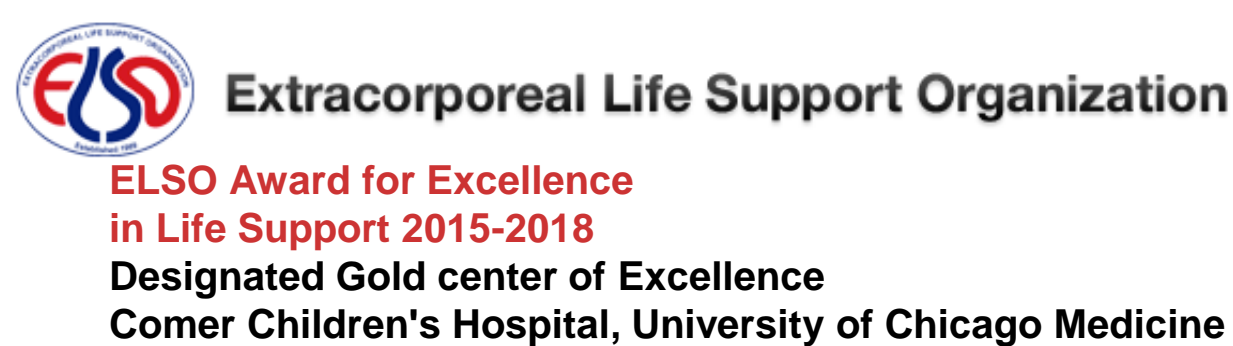
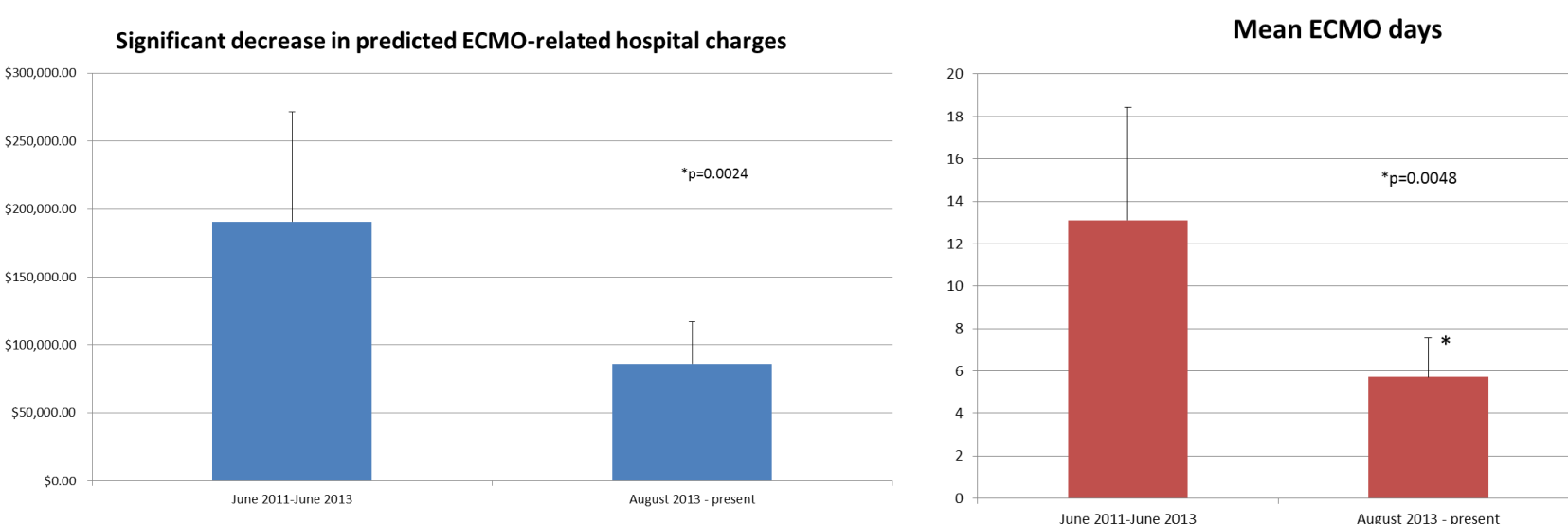


Fig 1. Improved ECMO metrics and ELSO Center of Excellence Designation

Methods/Approach

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External relationships directly impact case volume, which supports proficiency in complex surgical care.

Mentors and Collaborators

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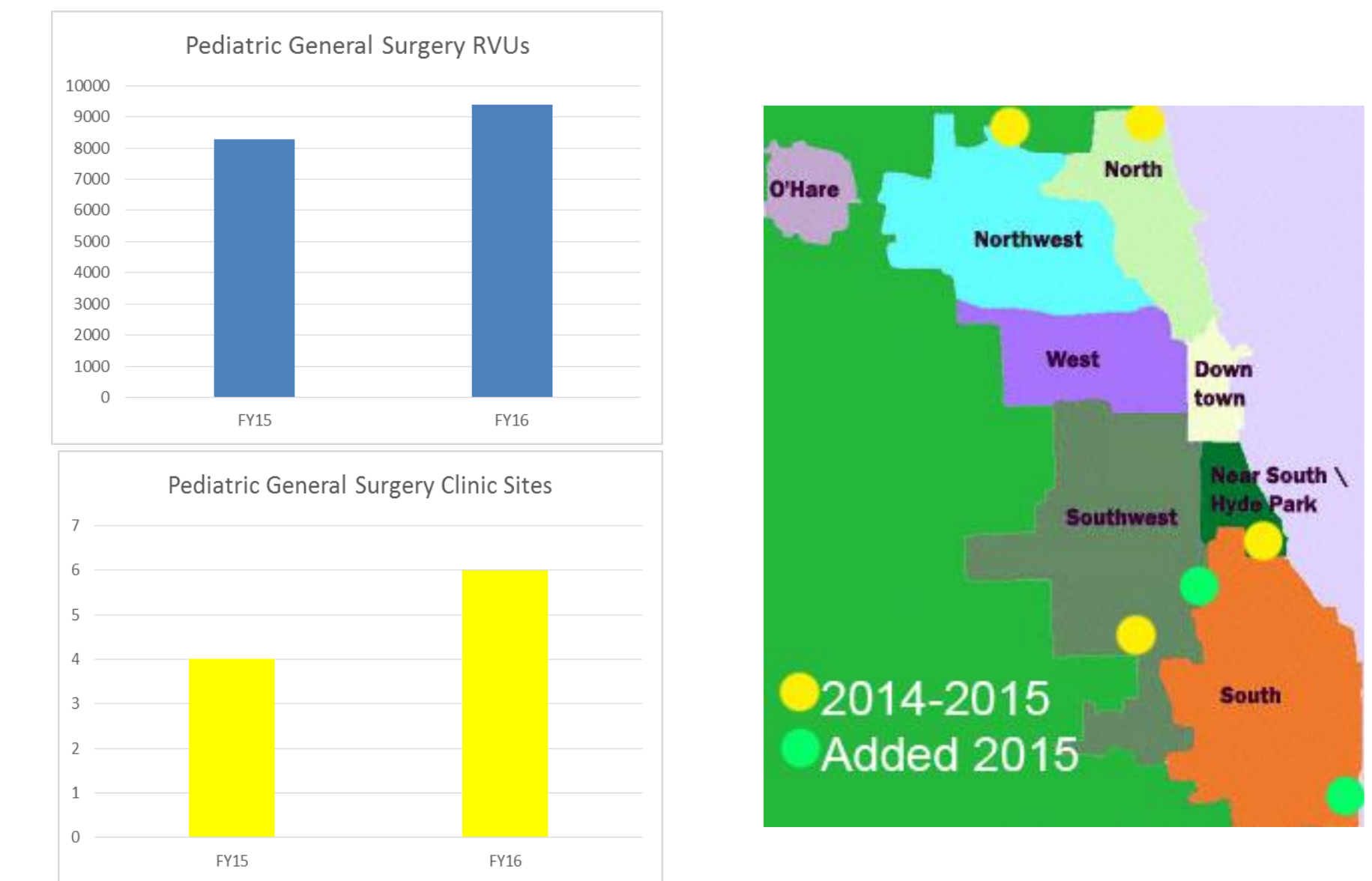


Fig 2. Improved wRVUs and clinic access

In concert with the Department of Pediatrics, we increased access to pediatric surgical consultation by establishing daily clinics and a "just say yes" policy, reducing wait times for clinic visits. We also began to track cases referred from hospitals with whom we have pediatric surgical coverage arrangements, and noted a significant contribution of complex cases to our hospital from these relationships. As part of a multidisciplinary University of Chicago pediatric team, we established clinics in two new geographic areas. Collectively, these steps led to an objective increase in wRVU performance (Fig. 2).