

## Summer 2015 Research Scholar

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### **ABSTRACT**

**Title:** The Financial Burden of Inflammatory Bowel Disease Healthcare Expenditure and Utilization in Pediatric Patients

**Background:** Inflammatory bowel disease (IBD) is a chronic inflammatory disease of the gastrointestinal tract that is typically divided into two main groups: Crohn's disease (CD) and ulcerative colitis (UC). Crohn's disease most commonly affects the end of the ileum and beginning of the colon, while ulcerative colitis is limited to the colon. Symptoms associated with IBD include gastrointestinal bleeding, abdominal cramps, diarrhea, weight loss, fever, and loss of appetite. Current literature of cost analysis studies consistently conclude that IBD is among the top five most expensive GI disorders. The majority of IBD-related healthcare expenditures are due to pharmaceutical claims, hospitalizations, and surgery.

**Objective:** A quality improvement study was conducted using medical records and cost data to determine the financial burden of IBD among a total of 360 pediatric patients over 3 years (2012-2014). By collecting inpatient and outpatient hospital costs, as well as professional fees, we sought to determine if there was a subset of pediatric patients with IBD who had a higher healthcare burden, and which factors were driving their increased health expense. We also hypothesized that patients with high telephone encounters might indicate those with higher costs, and may act as a surrogate marker.

**Results:** In 2012, the median total hospital cost per patient was \$16,792.01 and of the 188 patients, 17% accounted for 50% of yearly total costs. In 2013, the median total hospital cost per patient was \$10,138.00 and of the 79 patients, 8% accounted for 50% of yearly total costs. In 2014, the median total hospital cost per patient was \$14,144.88 and of the 93 patients, 10% accounted for 50% of yearly total costs. Analysis of telephone encounters compared to healthcare utilization costs for all three years demonstrated no correlation.

**Conclusion:** Interestingly, there is a small percentage of pediatric patients with IBD, between 8-17%, who accrue 50% of the yearly total costs from 2012-2014. Subset analysis showed that prescribed medication costs were the highest expense. We did not find any correlation between hospitalization costs and telephone encounters. In the future, it will be important to quickly identify those patients who are at risk for having the greatest healthcare utilization costs, and develop tailored interventions to try to aggressively reduce those costs while maintaining or improving quality care.