The Impact of a Value-Based Health Care in Inflammatory Bowel Diseases on Health Care Utilization

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Background

Standardized care pathways, task differentiation, and knowledge of costs in clinical decision making are all likely to contribute to improved outcomes and cost-effective care delivery. The UCLA Center for Inflammatory Bowel Diseases (IBD) launched a value-based health program for IBD management in February 2012 including all these aspects. The aim of this study was to compare utilization patterns observed at the UCLA Center for IBD to IBD care across California.

Methods

Administrative data were obtained from Anthem Blue Cross California. IBD patients and UCLA IBD Center providers were identified, as well as IBD non-program patients who were included as control group. Controls were matched 5:1 with the cases based on disease type, age, relapse rate, and Charlson Comorbidity Index in 2012. IBD-related office visits, laboratory tests, imaging studies, procedures, emergency department (ED) visits, hospitalizations, and pharmacy use in 2013 were compared.

Results

Forty-nine UCLA IBD Center patients were matched to 245 controls. Demographics were similar in groups with a mean age of 39 years (SD 12), 57% Crohn's disease and 43% ulcerative colitis, and 22% severe disease course in the year prior to analysis. We observed significantly less corticosteroid use in the UCLA IBD Center group (12% and 31%, respectively, p=0.03) and numerically more methotrexate (1% and 6%, p=0.11) and adalimumab (15% and 21%, p=0.43) use. Thiopurine (35% and 33%, p=1.00) and infliximab (14% and 15%, p=1.00) use were comparable in both groups. Patients in the UCLA IBD group had 25% fewer IBD-related office visits per year (1.7 and 2.2 visits per year, p=0.06), 12% to 100% fewer imaging studies (p=0.99), 10% less colonoscopies (p=0.91) and 1.3 to 3.4 times more biomarker testing (p<0.0002). Lastly, we observed 89% fewer hospitalizations (p=0.06) in the UCLA IBD Center group and 75% fewer ED visits (p=0.52).

Conclusion

An administrative database was utilized to identify IBD patients treated at the UCLA Center for IBD and to compare those patients with a matched control population in California. We found a significant decrease in corticosteroid use and a trend towards more use of steroid-sparing medications in the UCLA IBD group. Furthermore, UCLA IBD Center patients’ disease activity was monitored more frequently using biomarkers, and fewer hospitalizations and ED visits were observed. This study indicates that a comprehensive, value-based care pathway is likely to improve outcomes and decrease unnecessary health care utilization. Future more powerful larger sample studies will be needed to confirm these positive findings.