

Trends in IBD: medication utilization, disease progression, and healthcare costs in a commercial health plan population



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Background

- In 2015, approximately 3.1 million US adults were diagnosed with inflammatory bowel disease (IBD); a 72% increase from 1999.^{1,2}
- Crohn's disease (CD) and ulcerative colitis (UC) are inflammatory bowel diseases associated with decreased quality of life and high morbidity (including complications that may lead to surgery or hospitalization). Members with IBD are estimated to generate three times the healthcare spend per year as non-IBD members.^{3,4}
- Treatment goals have progressed from symptom management to endoscopic remission due to advances in biologic, anti-inflammatory drugs. These medications represent an increasing percentage of overall spend for payers.⁵
- As IBD incidence rises, additional studies are necessary to evaluate current trends in medication utilization, disease progression and associated healthcare costs.

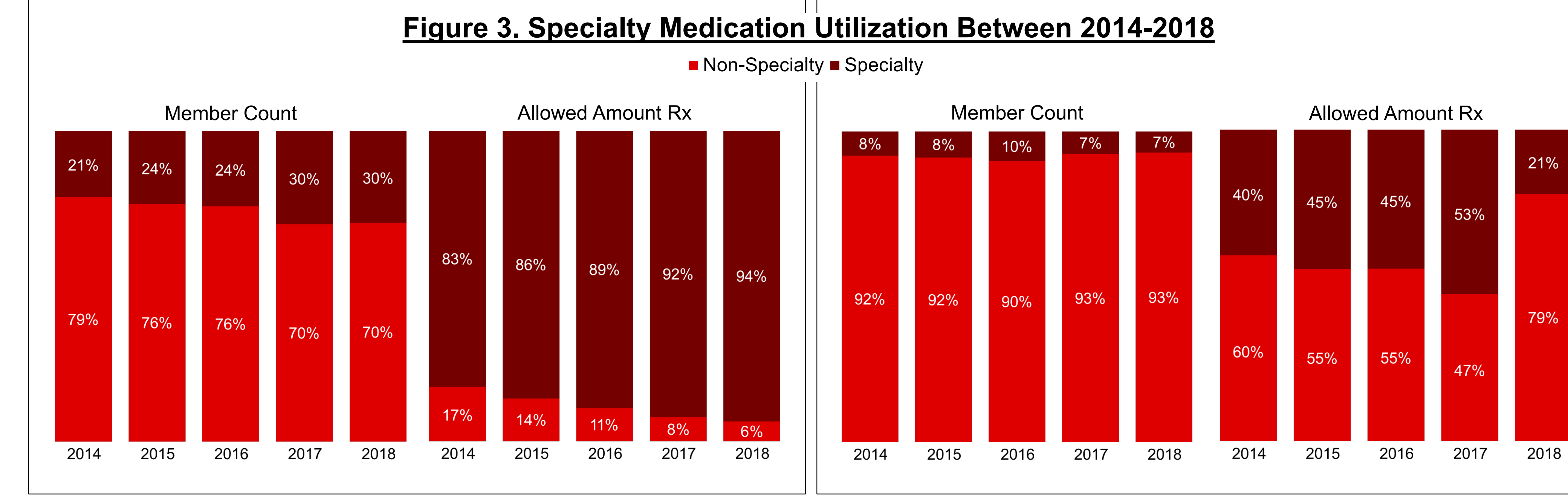
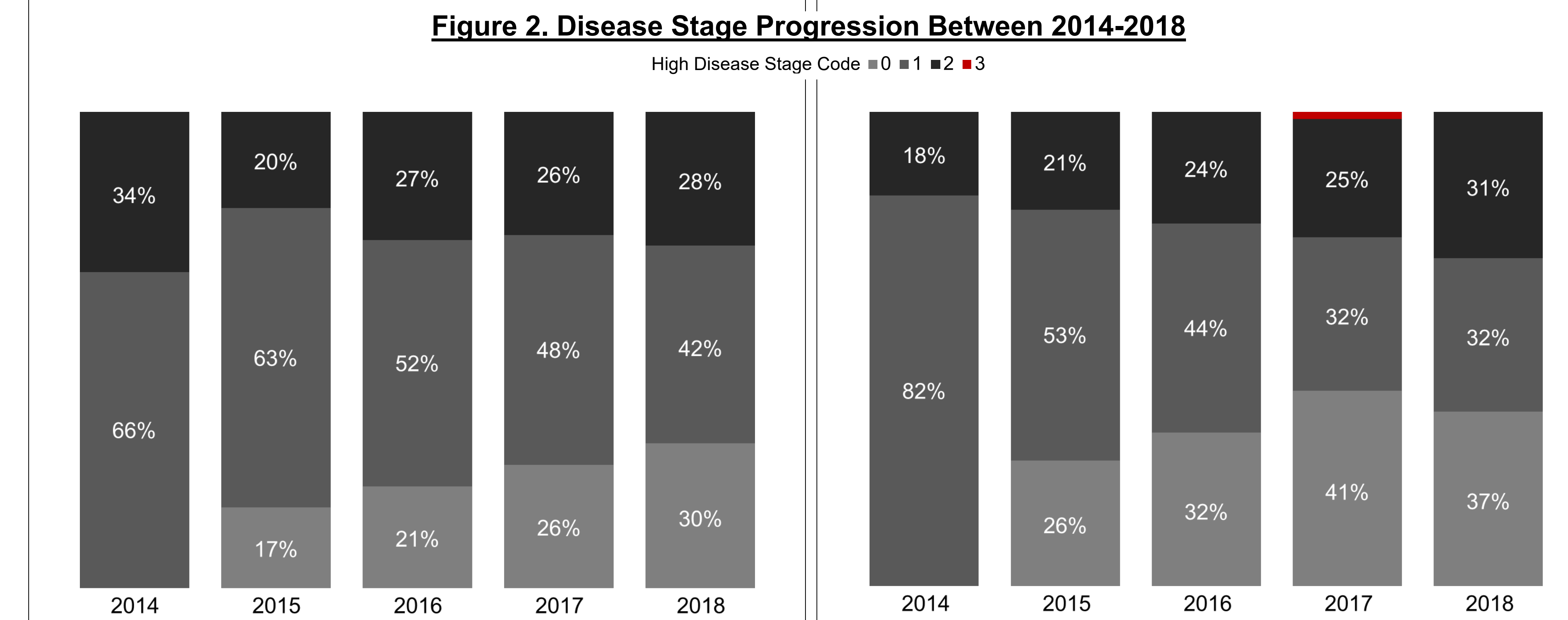
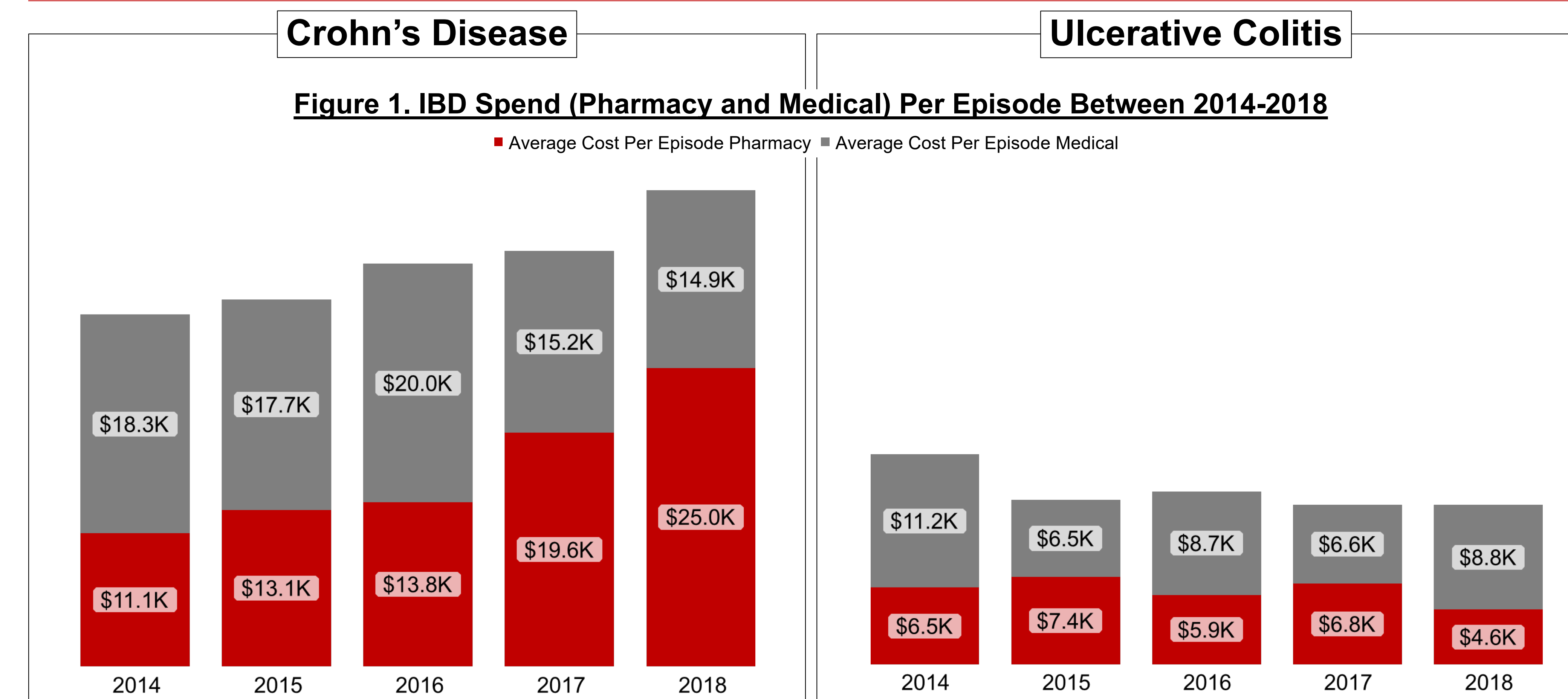
Objectives

- To analyze the trajectory of pharmacy and medical spend for members with IBD.
- To characterize disease progression patterns for members with IBD.
- To evaluate the overall impact of biologic, anti-inflammatory agents on clinical practice and healthcare costs within the IBD population.

Methods

- Members continuously enrolled between 1/1/2014-12/31/2018 who had an IBD episode in 2014 as defined by IBM Watson Health were identified. IBD episodes required an office visit or a hospitalization and a diagnosis of Crohn's disease (n=89) or ulcerative colitis (n=68).
- Healthcare costs were assessed by performing descriptive analysis on pharmacy and medical claims. Average costs per episode were calculated.
- Disease progression was assessed using disease stage codes as defined by IBM Watson Health:
 - Stage 1: IBD diagnosis without complication;
 - Stage 2: IBD diagnosis with complication;
 - Stage 3: Sepsis and/or shock attributed to IBD.
- Members without an IBD episode during a plan year were assigned disease stage 0 and an episode spend of \$0. This was done to average per episode costs and observe improvements in disease stage score.
- Medication utilization was assessed by performing descriptive analysis on pharmacy and medical claims. Injectable biologic medications were defined as specialty medications for the purpose of this study.

Results



Discussion

- IBD members with CD accounted for higher costs per episode compared to those with UC. This finding is consistent with expectations from previous literature.⁶
- Although the CD cohort demonstrated slight improvements in disease progression, annual healthcare costs escalated even when disease progression appeared to be relatively stable.
- While many members in the UC cohort improved, the overall group experienced more members with complications over time. Despite this, no clear pattern was observed for annual healthcare costs.
- Specialty medication therapy was responsible for a large proportion of annual pharmacy spend, particularly in those diagnosed with CD. Lower specialty medication utilization in UC contributed to a reduced average cost per episode.

Limitations

- The use of administrative claims data structured for transactional payment and not research has known limitations regarding lack of clinical documentation, misdiagnosis, and miscoding.
- Using the IBM Watson Health disease stage severity score is not an established or definitive guideline for IBD progression.
- High-cost medication claims were not accounted for by IBM Watson Health episode criteria if a member did not have a documented IBD diagnosis.

Conclusions

- Treatment for CD was found to be more costly than treatment for UC.
- IBD progression did not appear to show a direct relationship with healthcare costs.
- Specialty medication use was more common in members diagnosed with CD compared to UC.

References

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