

Introduction

- Inflammatory bowel disease (IBD) is characterized by chronic, relapsing periods of intestinal inflammation with an unpredictable clinical course¹.
- IBD flares may impact patients' quality of life, require frequent admissions, and contribute to missed work and impact work disability².
- Race and gender disparities have been shown to impact IBD's course.

Study Aim

- This study focuses on elucidating differences in work disability by race and gender in IBD patients.

Methods

A cross-sectional study at our tertiary referral center enrolled IBD patients on the day of their colonoscopy. Patients received surveys containing demographic, socioeconomic, quality of life, and work disability questionnaire (the WPAI tool).

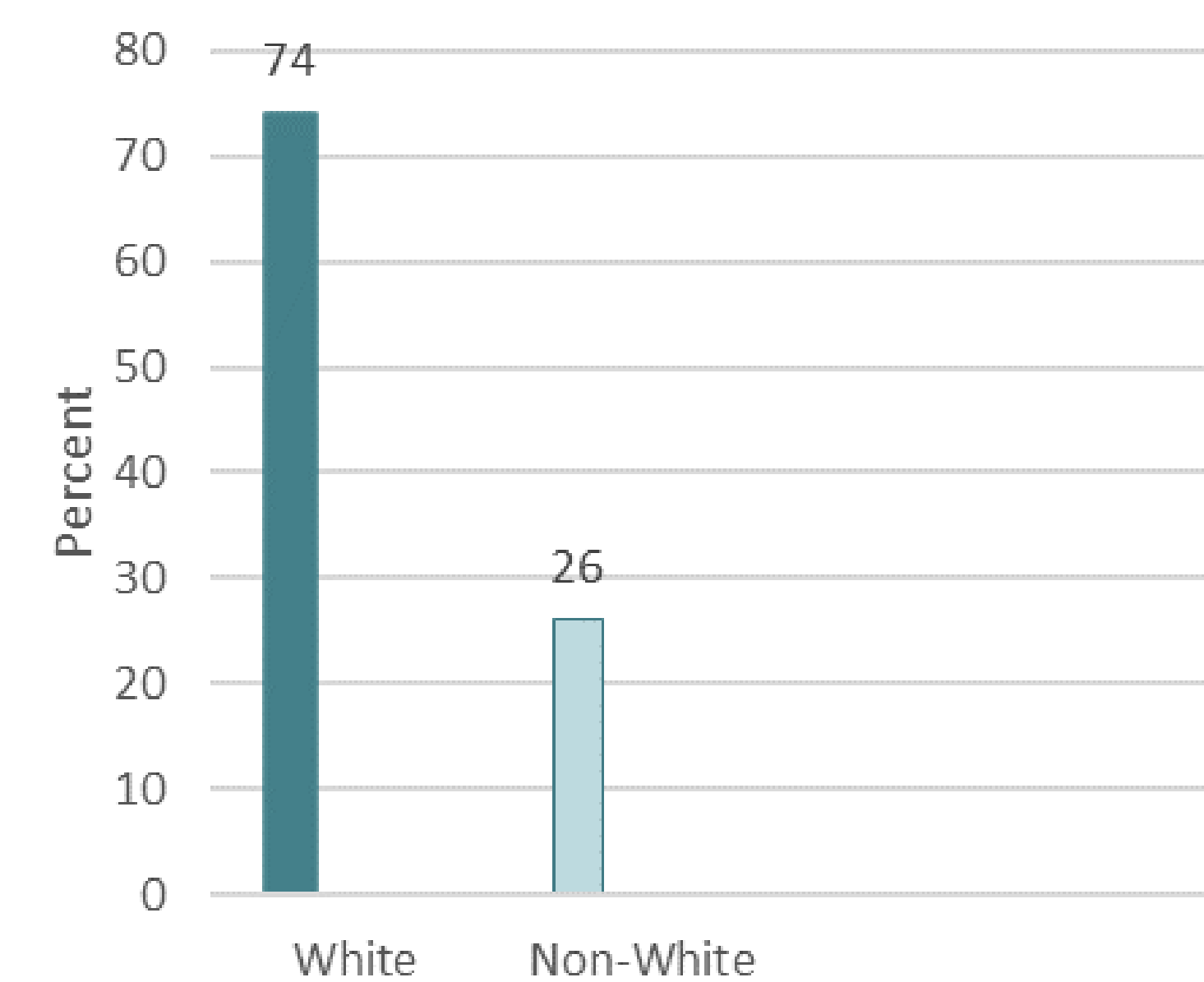
After scope completion, scores for endoscopic disease severity were recorded. Via a retrospective approach, charts were reviewed for long term outcomes: admissions, ER visits, steroid use, and surgeries one year post enrollment.

Statistics were analyzed using SPSS and Fisher's exact test. A multiple logistic regression adjusted for sex, race, IBD diagnosis, clinical disease activity, and endoscopic disease severity when work missed due to health was evaluated.

Results

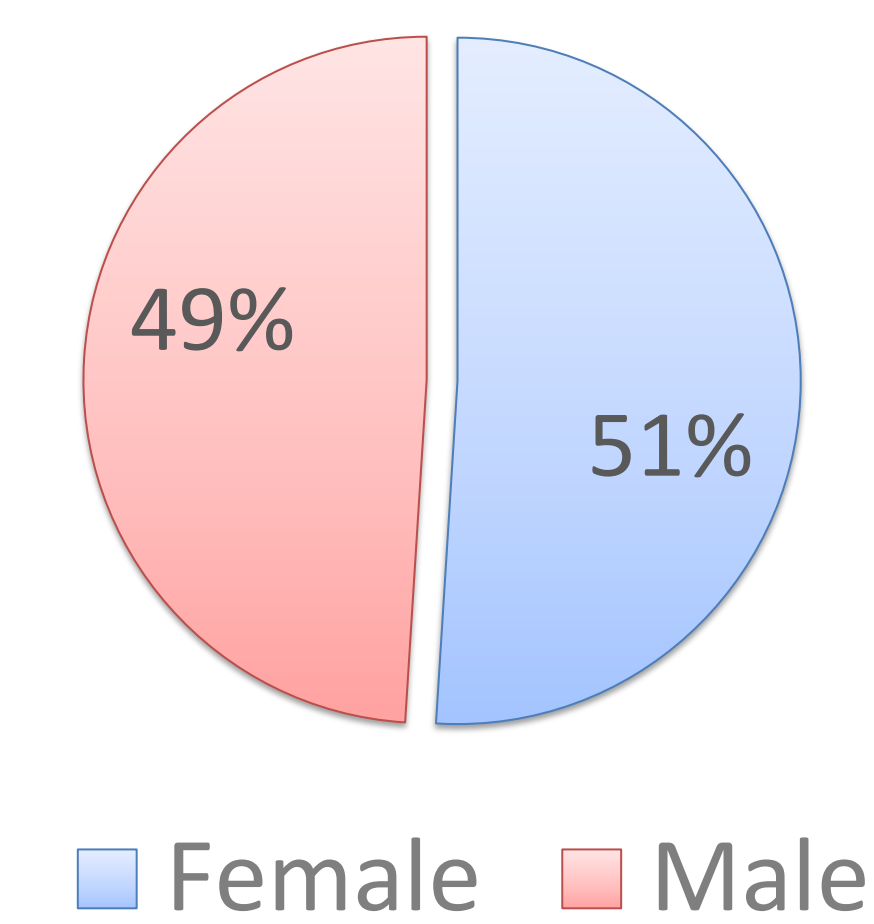
86 Patients Enrolled

Patient Race

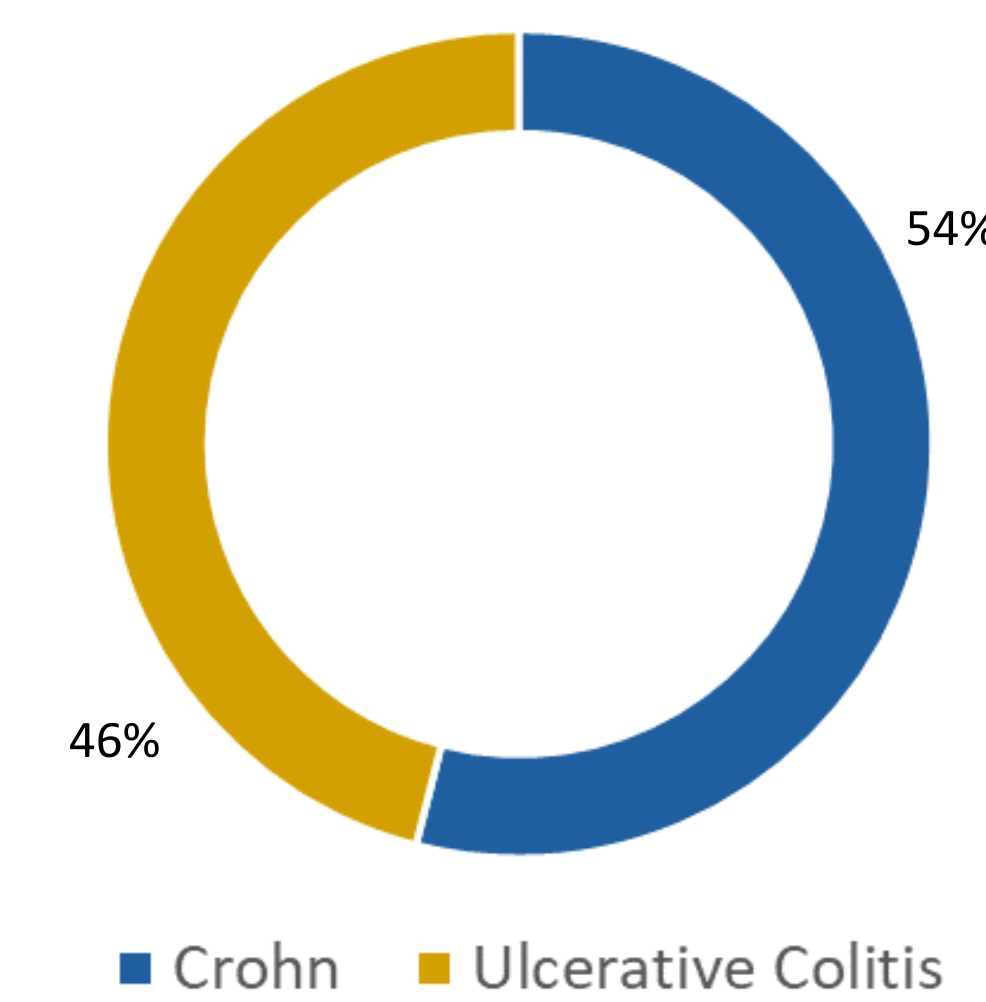


Patient Self-Identified Race

Patient Gender



IBD Type



Long Term Outcome Events by Gender and Race

| | Female (n, %) | Male (n, %) | p-value | Non-White (n, %) | White (n, %) | p-value |
|--------------------------|---------------|-------------|---------|------------------|--------------|---------|
| # of Hospital Admissions | | | | | | |
| 0 | 20 (100) | 15 (88.2) | .204 | 9 (100) | 22 (95.7) | 1 |
| 1 | 0 (0) | 1 (5.9) | .459 | 0 (0) | 1 (4.3) | 1 |
| # of ED Visits | | | | | | |
| 0 | 42 (93.3) | 39 (95.1) | 1 | 21 (100) | 56 (94.9) | .563 |
| 1 | 3 (6.7) | 1 (2.4) | .618 | 0 (0) | 3 (5.1) | .563 |
| # of Surgeries | | | | | | |
| 0 | 44 (97.8) | 35 (85.4) | .050 | 21 (100) | 53 (89.8) | .332 |
| 1 | 1 (2.2) | 5 (12.2) | .099 | 0 (0) | 6 (10.2) | .332 |
| # of Steroid Use Events | | | | | | |
| 0 | 26 (57.8) | 31 (75.6) | .110 | 15 (71.4) | 38 (64.4) | .604 |
| 1 | 18 (40) | 6 (14.6) | .015 | 4 (19) | 19 (32.2) | .400 |
| 2 | 1 (2.2) | 2 (4.9) | .603 | 1 (4.8) | 2 (3.4) | 1 |
| 3 | 0 (0) | 1 (2.4) | .477 | 1 (4.8) | 0 (0) | .262 |

Results

| Variable | | No Work Absences | >1 Work Absence | OR (95% CI) |
|-----------|-----------|------------------|-----------------|-----------------|
| Sex | Male | 35 (92.1) | 3 (7.9) | 2.4 (0.6-10.1) |
| | Female | 34 (82.9) | 7 (17.1) | |
| Race | White | 50 (92.6) | 4 (7.4) | 4.4 (1.1-17.5)* |
| | Non-White | 17 (73.9) | 6 (26.1) | |
| Diagnosis | CD | 33 (78.6) | 9 (21.4) | 10.1 (1.2-84)* |
| | UC | 37 (97.4) | 1 (2.6) | |
| Age | | 41.8 ± 14.6 | 40.0 ± 14.4 | 1.0 (0.9-1.0) |
| HBI | | 4.5 ± 4.3 | 7.0 ± 4.7 | 1.1 (1.0-1.3) |
| SES-CD | | 5.9 ± 6.0 | 14.6 ± 5.7 | 1.2 (1.1-1.4)* |

N (%) or mean ± standard deviation
*p<0.05
Abbreviations: OR=Odds ratio; CD= Crohn's Disease; UC= Ulcerative Colitis; HBI= Harvey-Bradshaw Index; SES-CD= Simple Endoscopic Score for Crohn's Disease
Data obtained via Work Productivity and Activity Impairment (WPAI) questionnaire, a validated tool of work impairment measure

- Gender:** Females had significantly more steroid use events (p=0.015) and surgeries (p=0.05) than males, but no differences in work impairment. However, differences in ER visits and admissions between genders one year following enrollment were not significant.
- Race:** We found no difference in long term outcomes between whites and non-whites. However, non-white patients had 4 times the odds of having work missed due to health compared to whites (OR 4.4; 1.1-17.5).
- IBD Type:** Crohn's patients were 10 times more likely to miss work due to health than those with UC (10;1.2-84.0). In CD patients, endoscopic disease severity, but not clinical disease, was associated with missed work.

Summary and Conclusions

- Understanding long term outcomes, health, gender, and race disparities is imperative for effective management of IBD patients.
- Our study suggests gender differences in long term outcomes of IBD, and race differences in missed work.
- Additional studies are needed to further characterize the reasons for these findings and to help improve patient's work and activity impairment.

References

- Ballou S, Hirsch W, Singh P, Rangan V, Nee J, Iturrino J, Sommers T, Zubiago J, Sengupta N, Bollom A, Jones M, Moss AC, Flier SN, Cheifetz AS, Lembo A. Emergency department utilisation for inflammatory bowel disease in the United States from 2006 to 2014. *Aliment Pharmacol Ther.* 2018 Apr;47(7):913-921. doi: 10.1111/apt.14551. Epub 2018 Feb 7. PMID: 29411411; PMCID: PMC5927595.
- Leso V, Gervetti P, Macrini MC, Russo F, Iavicoli I. Inflammatory bowel diseases and work disability: a systematic review of predictive factors. *Eur Rev Med Pharmacol Sci.* 2021 Jan;25(1):165-181. doi: 10.26355/eurrev_202101_24382. PMID: 33506905.