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Racial disparities in utilization of specialist care and medications in inflammatory bowel disease

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Abstract

BACKGROUND—Optimization of medical therapy and specialist care for inflammatory bowel disease may reduce morbidity. We sought to characterize racial disparities in utilization of healthcare and medical therapy for IBD.

METHODS—We performed a cross-sectional study of Black (n=137) and White (n=149) IBD patients recruited from an outpatient IBD clinic and through medical record review and telephone interview, compared utilization of IBD specialist services, emergency department services, and medications. We adjusted racial comparisons for demographic, socioeconomic, and clinical factors. RESULTS: After adjustment for confounders, Blacks were less likely than Whites to be under the regular care (defined as at least annual visit) of a gastroenterologist (aOR [adjusted odds ratio] 0.43; 95% CI: 0.25–0.75) or IBD specialist (aOR 0.37; 95% CI: 0.22–0.61). Follow-up with a primary care provider was, however, similar between Blacks and Whites. Over the preceding 12 months, Blacks were more likely than Whites to have at least one visit to the emergency department (aOR 2.02; 95% CI: 1.22–3.35), but there was no difference in hospitalization. Among CD patients with prolonged steroid use, Blacks were less likely than Whites to have been on infliximab (aOR 0.41; 95% CI: 0.21–0.77), but there were no racial differences in the use of immunomodulators (aOR 0.87; 95% CI: 0.48–1.60).

CONCLUSIONS—There are racial differences in utilization of IBD-related specialist services, emergency department visits, and infliximab that are independent of income and education. Modifiable barriers to healthcare access may play a role in these disparities.

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AUTHORSHIP ROLES

G.C.N. conceived the study design, contributed to its funding, analyzed the data, and drafted most of the original manuscript and will act as its guarantor. S.R.B. and T.A.L. were involved with the design of the study, provided funding for the study, and participated in the analysis and interpretation of data. M.L.H. and L.W.D. participated in the recruitment of subjects, participated in data interpretation and critically appraised the manuscript. M.W. assisted in the analysis of the study and participated in data interpretation and manuscript preparation.

G.C.N. is a consultant for Schering Plough, Canada and Abbott Pharmaceuticals, both of which had no involvement in any aspect of the study.

STATEMENT OF CONFLICT OF INTERESTS

The authors declare that they have no financial conflicts of interest or competing interests.

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Keywords

African American; Black; Crohn's disease; inflammatory bowel disease; race; ulcerative colitis

INTRODUCTION

Inflammatory bowel disease (IBD), which comprises Crohn's disease (CD) and ulcerative colitis (UC), is a chronic and relapsing condition that substantially diminishes quality of life. Morbidity from IBD may be reduced by optimization of medical therapy. Among the goals of medical treatment is to minimize the prolonged use of corticosteroids through implementation of steroid-sparing agents, such as immunomodulators and biologics, when clinically appropriate (1). Tumor necrosis factor-α (TNFα) antagonists have been shown to be highly effective in achieving and maintaining steroid-free remission in both CD and UC. These biologic agents have additionally resulted in lower hospitalizations and surgery when judiciously implemented (2–7). Though biologics are considerably more expensive than other medications in the IBD armamentarium, they have been shown to be cost-effective when appropriately indicated (8–11).

Data from a recent retrospective study suggest that there may be racial disparities in the use of immunomodulator therapy and infliximab for IBD, the first biologic approved for use initially for CD and subsequently UC (12). However, it was unclear whether the racial trends observed were independent of socioeconomic, health insurance, and income factors. Given the high costs associated with infliximab therapy and widely published racial differences in socioeconomic status, the above factors may have been important contributors to disparities in medication use. Medication utilization may also be influenced by the expertise of the physician providing IBD care. Prior studies suggest that the medical management of IBD may be more optimized under the care of IBD specialists and tertiary referral centers (13;14).

To further characterize the potential determinants of health disparities in IBD, we have conducted a cross-sectional interview study with retrospective medical chart review to ascertain patterns of health care utilization, specialist care, and medication utilization among Black and White IBD patients seen at a tertiary referral center, while measuring important clinical and socioeconomic factors.

METHODS

Study Population

All Black IBD patients that have received care at the adult faculty outpatient gastroenterology clinics of Johns Hopkins Medical Institutions from IBD specialists have been invited to join a study of genetic risk factors for IBD, requiring completion of a phenotype questionnaire including medication use, permission to access medical records for chart review, and blood withdrawal, beginning in October of 2003. On select clinic days beginning in 2005, the same recruitment specialist, approached all White (as well as Black) IBD patients to join a comparison study requiring completion of the same phenotype questionnaire including medication use, and permission to access medical records for chart review. Since 2005, Black patients that have not wanted to participate in the genetic study have been given the option of joining the phenotype comparison study. All subjects had a confirmed diagnosis of IBD by pathology, endoscopy, and medical records and were at least 18 years of age. All patients were asked if they would agree to be re-contacted for additional research studies regarding IBD. Both Black and White IBD patients were contacted by telephone between October 2005 and December 2008, and those who agreed to participate

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were administered a health services and utilization questionnaire for this current study and comprised the study population.

Study Protocol

Participants were contacted over the phone by a single interviewer who administered a 40 – 45 minute questionnaire that queried socioeconomic status (employment status, marital status, education, and income), access to healthcare, health insurance, utilization of ambulatory physician and specialist services, emergency room visits, and hospitalizations. The questionnaire also used validated scales to measure health-related quality of life and disease severity. Medical charts were reviewed to determine disease phenotype using the validated NIDDK IBD Genetics Consortium modification of the Montreal Classification as previously described (15;16). Medical chart review was also used to classify patients as having ever or never used thiopurines (azathioprine or 6-mercaptopurine), methotrexate, other immunomodulators, or infliximab. Patients were also designated as having prolonged steroid use if they were on steroids for more than 3 months.

Study Instruments

Utilization of health and physician services was ascertained by patient self-report during the telephone interview. Though subjects were recruited from our faculty clinic, they may have been seen as consultations and did not necessarily receive regular gastroenterology or IBD specialist care at our center. General health-related quality of life (HRQL) was measured by the SF-12 version 2 and disease-specific HRQL by the Short Inflammatory Bowel Disease Questionnaire (SIBDQ), an abbreviated validated version of the IBDQ (17). For Crohn's disease patients, disease severity was measured using the Chapel Hill Index, a validated self-report instrument, that is based on and correlates with the Crohn's Disease Activity Index (18). Similarly, the Simple Colitis Clinical Activity Index was used to measure disease severity in ulcerative colitis (19). For both continuous scales, higher values reflected greater disease severity. Comorbidity was self-reported using a validated summary scale, the Self-Administered Comorbidity Questionnaire (SCQ) (20).

Statistical Analysis

All analyses were conducted using Stata 10.0 software (StataCorp LP, College Station, Texas). We used the unpaired Student t- test or Mann-Whitney test, as appropriate, to compare differences in means of continuous variables and the chi-square statistic for difference in proportions. The outcomes of interest were utilization of: routine gastroenterologist and IBD specialist care, non-routine health services (emergency department visits and hospitalizations), immunomodulators and biologic agents. We used multiple logistic regression to determine the independent associations between these outcomes and race while adjusting for age, age at diagnosis, sex, comorbidity, health insurance, income, and education while accounting for clustering at the physician level. For utilization of biologics, we restricted analyses to infliximab and excluded other biologics (notably adalimumab) from consideration. Only infliximab was FDA approved for CD at the start of the study. Similarly, we restricted analysis of infliximab to only CD as infliximab was not approved for UC at the start of the study. Additionally, we adjusted infliximab for calendar year as its use in CD may have increased over time.

Ethics Review

This study was approved by the Institutional Review Board at the Johns Hopkins Medical Institutions.

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RESULTS

Demographic and Clinical Characteristics

The baseline demographic characteristics of the study population are shown in Table 1 stratified by race. Compared to Whites, Blacks had lower income and level of education. They were also less likely to have private health insurance and be married. Table 2 shows clinical characteristics and disease phenotype among both races. Blacks with CD were more likely to have involvement of the upper GI tract than Whites (22% vs. 12%, P=0.02), but were otherwise not different with respect to disease location or behavior. Black UC patients were less likely to have extensive UC than Whites (49% vs. 72%, P=0.05). There were no racial differences in general or IBD-specific health-related quality of life (with nearly identical mean SIBDQ scores), nor were there differences in disease severity as measured by the Chapel Hill Index for CD or Simple Colitis Clinical Activity Index for UC, suggesting that overall Black and White IBD patients were well matched for disease severity and impact of disease at the time of the questionnaire administration.

Utilization of Ambulatory Specialist Care

Blacks and Whites reported essentially identical number of IBD-related ambulatory clinic visits in the preceding 12 months (4.7 *vs.* 4.7 visits, P=0.94), although Blacks were less likely than Whites to be seen by a gastroenterologist on a regular basis at least once a year (85% vs. 93%, P=0.03). While 77% of Blacks reported regularly seeing a gastroenterologist who had a reputation as an IBD subspecialist (i.e. at least once a year), 92% of Whites did so (P=0.001). Similarly, a much lower proportion of Blacks reported that an IBD specialist assumed primary responsibility for their IBD-related healthcare as compared to Whites (46% vs. 72%, P<0.0001). In contrast, however, a similar proportion of Blacks and Whites reported seeing a primary care physician on a regular annual basis (83% vs. 79%, P=0.8). After adjustment for age, age at diagnosis, sex, comorbidity, health insurance payer, educational attainment, income, and prolonged steroid use, Blacks were significantly less likely than whites to be seen regularly by a gastroenterologist (aOR 0.43; 95% CI: 0.25–0.75) or an IBD specialist (aOR 0.37; 95% CI: 0.22–0.61). However, the lower likelihood that primary responsibility of IBD care was assumed by an IBD specialist among Blacks compared to Whites was no longer statistically significant (aOR 0.34; 95% CI: 0.10–1.18). Independent of race, uninsured patients were also considerably less likely than privately insured patients to be seen at least annually by a gastroenterologist (aOR 0.20; 95% CI: 0.05–0.88) or an IBD specialist (aOR 0.29; 95% CI: 0.14–0.59).

Perceived Barriers to Access of Ambulatory IBD Healthcare

Table 3 shows racially stratified patient perceptions of whether there was difficulty with: scheduling clinic appointments, affording healthcare, worries over the cost of healthcare, excessive wait times, transportation to clinics, and obtaining referrals for IBD specialist care. Blacks more often than Whites reported difficulty with obtaining specialist referrals (12% *vs.* 5%, P=0.02) and concerns over healthcare-related costs (18% *vs.* 7%, P=0.01).

Utilization of Non-routine Health Services

Blacks experienced more than 3-fold the number of IBD-related visits to the emergency department (ED) than whites over the preceding 12 months (1.4 *vs.* 0.4 ED visits, P=0.0001), with the proportion of Blacks who had at least one IBD-related visit to the ED in the previous 12 months nearly 2-fold higher than that of whites (40% *vs.* 22%, P=0.001). The number of ED visits decreased with increasing quartile of income independent of race (β-coefficient = −0.26 visits/quartile, P=0.01). After multivariate adjustment for age, age at diagnosis, sex, comorbidity, health insurance payer, prolonged steroid use, educational

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attainment, and income, Blacks were still twice as likely to have had at least one ED visit over 12 months than Whites (aOR 2.02; 95% CI: 1.22–3.35). Income was an independent predictor of ED utilization with every incremental quartile of income being associated with a 31% lower likelihood of having at least one ED visit (0.69; 95% CI: 0.58–0.81) as was age with every incremental decade associated with a 43% decrease in odds of an ED visit (aOR 0.57; 95% CI: 0.44–0.75).

There were no differences in average number of IBD-related hospitalizations between Blacks and Whites during the previous 12 months (0.8 *vs*. 0.5 hospitalizations, P=0.10), nor was there a difference in the proportion of Blacks and Whites who required at least one hospitalization in the preceding 12 months (31% *vs.* 26%, P=0.3; aOR 1.09; 95% CI: 0.59–2.01).

Utilization of Immunomodulators and Biologics

Table 4 shows overall utilization of immunomodulators and infliximab and among clinical subgroups, stratified by race. Utilization of immunomodulators was lower among Blacks than Whites (52% *vs.* 68%, P=0.006), but this was only significant among those with UC (38% *vs.* 64%, P=0.009) and not those with CD (59% *vs.* 70%, P=0.11). However, Blacks were also less likely than Whites to have ever received prolonged steroid use (>3 months) (72% vs. 87%, P=0.003). When we restricted analyses to patients who required prolonged steroid use (>3 months), the proportions of Black and White IBD patients who were taking immunomodulators were not statistically different (67% vs. 74%, P=0.24). Black CD patients were less likely than White CD patients to receive infliximab (41% *vs.* 60%, P=0.01). Infliximab use was not statistically different between Blacks and Whites among CD patients with abdominal penetrating disease (43% *vs.* 52%, P=0.6), perhaps considered as the most aggressive form of CD. There was a more notable, but still non-significant trend towards lower infliximab use among Blacks in the subgroup of patients with perianal CD (48% *vs.* 69%, P=0.12). Among the subgroup of CD patients with prolonged steroid use, infliximab utilization was 20% lower among Blacks compared to White (47% *vs.* 67%, P=0.02). Among CD patients with prolonged steroid use, the adjusted odds ratio for infliximab use in Blacks compared to Whites was 0.41 (95% CI: 0.21–0.77) after adjustment for age, age at diagnosis, sex, comorbidity, type of health insurance, educational attainment, household income, and calendar year. In this same subgroup, there was no statistically significant racial difference in the use of immunomodulators (aOR 0.87; 95% CI: 0.48–1.60) or any steroid-sparing agent (either an immunomodulator or infliximab) (aOR 0.87; 95% CI: 0.47–1.61).

DISCUSSION

We have demonstrated racial disparities in the utilization of IBD specialist care, non-routine healthcare visits to the emergency department, and high-cost medical therapies. Unlike prior studies that have reported disparities in IBD medical therapy but did not account for important socioeconomic and clinical confounders, our study also assessed factors such as income, educational attainment, health-related quality of life, prolonged steroid use, and access to care. Thus, our findings not only substantiate the presence of racial disparities in IBD, but provide additional insight into some of their potential mechanisms. Furthermore, in addition to Black race being a predictor of higher utilization of emergency services, progressively lower household income was also a strong and independent factor.

Our findings were consistent with those of Flasar et al. who similarly found a lower frequency of steroid, immunomodulator, and infliximab use in Blacks (12). Disease activity may be an important predictor of immunomodulator and infliximab use, and chronic steroid use is considered by some as a surrogate indicator of disease severity. It is, however, an

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imperfect marker due to practice variations in the use of steroid-sparing agents, which is frequently suboptimal (21). Despite finding higher prolonged steroid use among Whites, we found no racial differences in other direct measures of disease severity or health-related quality of life. We performed analyses that were restricted to subjects with prolonged steroid use because it is an appropriate indication for steroid-sparing agents (1). In doing so, we found racial disparities in use of the more costly infliximab, but not immunomodulators. These racial differences were persistent even after multivariate adjustment for income and other confounders. It is interesting that while we found disparities in use of infliximab among CD patients with steroid dependence, no such inequities were noted in patients with abdominal penetrating disease. This finding may have been due to this subgroup analysis having being underpowered. Alternatively, as many practitioners consider abdominal penetrating disease the most aggressive and worrisome form of CD, racial disparities in the use of infliximab in this group may be markedly narrowed to become insignificant. It may have also resulted from the availability of immunomodulators as an alternative to infliximab therapy for the indication of steroid dependence, and, as such, the use of infliximab was more discretionary. In contrast to our observations, a study from a Northern California health maintenance organization found no difference in utilization of infliximab between Blacks and Whites IBD patients (22). This inconsistency may be explained by health systems-based differences in access to specialists and expensive medical therapies.

Our study expectedly showed decreased utilization of specialist care among uninsured individuals. Because only 9% of Whites and 24% of Blacks were insured by Medicare or Medicaid, our study may have been underpowered to detect difference in utilization between government-sponsored and private insurance programs. We should note that even though most of our study population was privately insured, these insurance programs are likely to be heterogenous with respect to co-pays and deductibles, flexibility in choosing care providers, and types of specialist and procedural services and maximum benefits covered – factors which may additionally impact health utilization. There may be systematic racial differences in types of health insurance programs that may engender differential access to specialist care. Our study's lack of detailed insurance data limits our ability to evaluate the independent or modifying contribution of the above insurance-related factors to racial disparities in health utilization. Similarly, the role of health insurance in racial disparities may have been obscured by our inability to differentiate between those who were adequately insured and those who were underinsured, the numbers of which have increased by 60% in the United States between 2003 and 2007 (23). The latter group, despite being classified as insured, may still have greater need for emergency department services in lieu of outpatient care.

It is possible a physician's level of expertise in managing IBD may play a role in disparities in medication use. In this study, Whites were more likely than Blacks to be seen at least annually by a gastroenterologist or an IBD specialist. This racial difference was even more pronounced when we compared the proportion of patients who received most of their IBD-related healthcare by an IBD specialist. These disparities in IBD specialist care remained evident even after adjusting for socioeconomic and clinical factors, including prolonged steroid use. Higher utilization of specialist versus generalist care among Whites compared to Blacks has also been described for gastrointestinal endoscopic procedures (24). Among the potentially contributing barriers to IBD specialist care are difficulties in obtaining specialist referrals and worries over healthcare costs that were more often reported by Blacks than Whites in our study. Racial variations in referral patterns to specialists has been shown to be an important contributing factor to disparities in utilization of other health services such as coronary angiography (25). Geographic access may play a role in the observed disparities as well. A recent study has shown that communities in which Blacks were clustered had correspondingly fewer gastroenterologists (26). Our findings of disparities in utilization of

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specialist care should also be construed in the context of an increasing shift of IBD care to primary care physicians. A recent study of a northern California health maintenance organization suggested a 25-33% decrease in ambulatory IBD visits to gastroenterologists and a greater than 4-fold increase in visits to primary care physicians between 1998 and 2005 (27). In contrast, there was an increase in the use of immunomodulators and infliximab during the same time period. Thus, at least in a homogenously insured population, there is no clear correlation between trends in utilization of specialist care and IBD medical therapy.

Complementing the lower IBD specialist utilization in our population, is our finding of a higher rate of emergency room visits among Blacks compared to Whites. This may be another manifestation of inequities in access to the healthcare system. Though utilization of emergency departments may be an indication of urgent need for care, an estimated 85% of ED visits are made for non-life-threatening reasons (28). These may also be a reflection of lack of access to ambulatory health services. As might have been expected, higher income, which would enable greater access to outpatient care, was associated with lower likelihood of emergency department visits. Interestingly, older age was also associated with fewer ED visits after adjustment for income, educational attainment, comorbidity, and health insurance or lack thereof. This finding may be explained by poor adherence to medical therapy and follow-up among younger individuals that arises from lesser maturity and acceptance of responsibility for chronic illness. Older individuals may also be more knowledgeable and experienced IBD patients, and therefore may do a better job with self management of their disease. Even after accounting for the above predictors, Blacks in our study were still almost twice as likely as Whites to require at least one ED visit over the preceding 12 months. This finding cannot be explained by disease severity, as Blacks had lower prevalence of chronic steroid use and similar disease activity indices scores and number of hospitalizations.

Our study has several limitations, the most significant of which is that the study population was recruited from a tertiary referral center. The prevalence of chronic steroid use is high and similar to that observed from other tertiary centers (12;21), which would support that these patients likely have greater disease severity than in a community setting. Thus, our results are not population-based and may not be generalizable to the entire IBD population or even other tertiary centers. Our study population is also a self-selective group in that these individuals were able to access care at a tertiary referral center. Consequently, we may have underestimated the true extent of racial disparities in healthcare utilization. Another limitation of the study is that the data, and especially that related to health utilization, were based on patient self-report. Because most of our subjects did not receive their care exclusively at Johns Hopkins and often the faculty gastroenterologist served as a consultant only, medical records from our institution could not reliably comprehensively ascertain health utilization. Although the extent of recall error would not be expected to vary by race, the possibility of recall bias still exists. However, other large survey-based studies of health utilization such as the National Health Interview Study (www.cdc.gov/nchs/about_nhis.htm) have also relied on self-report.

Despite the above caveats, our study provides additional evidence of racial disparities in the field of IBD that may impact the overall effectiveness of medical therapy. Clinical trials tout the potent efficacy of biologics, but these results were derived under ideal study conditions, in which minorities are underrepresented (29–31). The relatively lower utilization of specialist care and anti-TNF agents among Blacks outside of a protocol-driven milieu may generate racial differences in how well the efficacy of clinical trials is translated into real-world effectiveness. These racial gaps may become increasingly relevant with growing evidence supporting the initiation of infliximab early in the course of disease as a first- or second-line agent (32;33). In addition to barriers to health care access, the disparities observed from the studies may also arise from patient factors such as patient preferences and

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socio-cultural beliefs. Future studies should delineate these potential contributions to healthcare and medication utilization. Meanwhile, the development of educational directives and guidelines may help to standardize indications for referrals to specialists and use of biological agents.

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Abbreviations

CD	Crohn's disease
IBD	inflammatory bowel disease
SD	standard deviation
SIBDQ	short IBD Questionnaire
UC	ulcerative colitis

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STUDY HIGHLIGHTS

What is current knowledge

- Optimal medical management of inflammatory bowel disease impacts clinical outcomes
- There is data to suggest that there are racial disparities in the utilization of medical therapies in inflammatory bowel disease

What is new here

- Blacks with inflammatory bowel disease were less likely to undergo at least once yearly visits to a gastroenterologist or IBD specialist
- Black inflammatory bowel disease patients were twice as likely than Whites to require at least one visit to the emergency department over a 12 month period
- While there was no difference in the use of immunomodulators among Blacks and Whites with prolonged steroid use, Blacks were less than half as likely to receive infliximab

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Table 1

Demographic characteristics of inflammatory bowel disease patients

	White (N = 149)	Black (N = 137)
Mean age (yrs) (SD)	41.7 (14.2)	40.1 (14.2)
Female (%)	54%	63%
Education (yrs) (SD)	14.8 (3.5)	13.6 (4.2)*
Income		*
Bottom quartile	13%	29%
2nd quartile	6%	21%
3rd quartile	12%	12%
Top quartile	69%	38%
Married (%)	65%	44%*
Health Insurance (%)		*
Private	89%	71%
Medicare/Medicaid	9%	24%
Uninsured	3%	6%
Smoking		
Never	59%	63%
Ever	41%	37%

* P<0.01

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Table 2

Clinical characteristics of inflammatory bowel disease patients

	White (N = 149)	Black (N = 137)
Mean age at diagnosis (yrs) (SD)	29.3 (14.0)	28.0 (13.2)
Disease duration	12.8 (10.2)	11.9 (9.2)
Family History of IBD	22%	19%
Comorbidity score (SD)	3.1 (3.8)	3.7 (3.8)
Health-related Quality of Life		
SF-12v2		
Physical (SD)	48.8 (5.8)	48.1 (6.8)
Mental (SD)	48.1 (11.0)	48.2 (11.6)
Short IBDQ (SD)	52 (13)	50 (15)
Disease subtype		
Crohn's disease	61%	66%
Ulcerative colitis	39%	34%
Disease Phenotype		
Disease location†		
L1: Ileal	16%	18%
L2: Colonic	23%	30%
L3: Ileocolonic	61%	51%
L4: Isolated upper GI	0%	1%
Upper GI disease	12%	22%*
Disease Behavior†		
Inflammatory	40%	48%
Stricturing	28%	36%
Penetrating	32%	17%
Perianal disease†	40%	31%
Disease Extent‡		*
Proctitis	5%	15%
Left-sided	23%	36%
Extensive	72%	49%
Disease Severity‡		
Chapel Hill Index (SD)†	139 (120)	140 (153)
SCCAI Score (SD)‡	3.7 (3.4)	4.7 (3.4)

*P<0.05

†For Crohn's disease patients

‡For ulcerative colitis or indeterminate colitis

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Table 3

Perceived barriers of access to IBD-related healthcare

	White (N = 149)	Black (N = 137)
Difficulty making appointments	13%	16%
Difficulty affording healthcare	19%	19%
Worry over costs of healthcare	7%	18%*
Perceived excessive waiting times	9%	14%
Difficulty with transportation	11%	7%
Difficulty obtaining referrals to specialists	5%	12%*

*P<0.05

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Table 4

Utilization of immunomodulators and infliximab among clinical subgroups

	White (N = 149)	Black (N = 137)	p-value
Immunomodulator Use	68%	52%	0.006
Prolonged steroid use (N=212)	74%	67%	0.24
Crohn's disease (N-181)	70%	59%	0.11
Ulcerative colitis (N=105)	64%	38%	0.009
Infliximab*	60%	41%	0.01
Prolonged steroid use (N=139)	68%	47%	0.01
Penetrating disease (B3) (N=43)	52%	43%	0.6
Perianal disease (N=62)	69%	48%	0.12

*Crohn's disease only