

Outpatient Health Care Utilization of Patients with Inflammatory Bowel Disease

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On the basis of the normal life expectancy of inflammatory bowel disease patients, the early onset of their disease, and the variety of symptoms, inflammatory bowel disease patients were anticipated to be frequent users of outpatients services. This study assesses (1) the characteristics, (2) outpatient health care utilization, and (3) the degree of satisfaction with health care of inflammatory bowel disease patients compared to patients with other gastrointestinal disease. The study method was a secondary analysis of data collected on 395 patients attending the University of Calgary Gastroenterology Outpatient Clinic in 1988. Inflammatory bowel disease patients were significantly younger ($P < 0.001$) and better educated ($P < 0.05$) than other patients. During the past year inflammatory bowel disease patients consulted significantly more often with their gastroenterologist ($P < 0.001$) and spent more time in hospital ($P < 0.05$) than other patients. Inflammatory bowel disease patients also consulted more frequently with herbalists and naturopaths. Lastly, inflammatory bowel disease patients were as satisfied with the health care they received as other patients. These results provide information useful for health care planners as well as for those dealing directly with inflammatory bowel disease patients.

KEY WORDS: inflammatory bowel disease; health care utilization; stressful events.

Inflammatory bowel disease (IBD) is a spectrum of diseases affecting the bowel, the most common of which are ulcerative colitis and Crohn's disease. Although the etiology of IBD is still poorly understood, current speculation suggests an interplay between infectious, environmental, genetic, and immunologic factors.

It has been found most commonly that the incidence of IBD is highest in early adult life, in people with a higher socioeconomic status and a higher education, and in the white population (1-3). Females are found to be equally or more likely than men to develop the disease (4, 5). Few studies have

investigated the experience of stressful life events in IBD patients. Ulcerative colitis patients were not found to be different from the general population in terms of life stress factors (6, 7). In a study of Crohn's disease patients, it was concluded that successful adaptation to stressful events of these patients is more closely related to personality than to the activity or the extent of the disease (8).

On the basis of the normal life expectancy of IBD patients, the early onset of IBD, and the variety of symptoms, IBD patients can be expected to use the health care system frequently. While several investigators have studied the utilization of hospitalized patients, few have assessed the use of outpatient services. Grace and Priest (9) report frequent utilization of general practitioners, gastroenterologists, and other medical practitioners and a high number of visits to hospitals for outpatient procedures among patients regardless of disease activity. How-

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ever, their study included only members of the Canadian Foundation for Ileitis and Colitis, and no control group was utilized.

Patients who are dealing with a chronic disease for which no satisfactory treatment or therapy is available may easily become dissatisfied with their treatment and sceptical of medical care. Whether this is so for IBD patients has yet to be studied.

The objectives of the present study are to assess: (1) the demographic and health status-related characteristics of IBD patients as compared to other gastroenterological patients, (2) whether IBD patients use the health care system more often than other patients, and (3) whether there is a difference in satisfaction with received health care between IBD and other patients.

MATERIALS AND METHODS

The study design consists of a secondary analysis of the data collected in a study among patients attending the University of Calgary Gastroenterology Outpatient Clinic (10). The clinic draws from a mixed urban-rural population of approximately 1,000,000 people. The objective of this study was to investigate the determinants of alternative medical care use. In the study, 61 of all 395 (15.4%) patients attending the clinic between May and September, 1988, were diagnosed with IBD. The diagnosis of IBD was made by experienced gastroenterologists according to established diagnostic criteria (11, 12). All the diagnoses were reviewed by one of the investigators (L.R.S.).

The overall response rate in the study was 92.1%. Of the nonresponders, 5.1% refused to complete the questionnaire and the remaining patients (2.8%) did not answer due to various incapacities.

The questionnaire addressed sociodemographic characteristics, self-reported health status, experience of stressful life events during the past year, health care utilization during the past year (including number of general practitioners seen, number of specialists seen, number of visits to a hospital emergency department and to medical clinics, and number of days spent in hospital), satisfaction with medical care, and scepticism toward medical care. In addition, information was sought on alternative medical care use. Self-reported health status has been found to be highly correlated with the presence of specific health problems and to be a predictor of health care utilization and mortality (eg, 13).

Stressful life events were measured by means of an open question that included examples of events as used in the Social Readjustment Rating Questionnaire (14). This question was coded using the 43 categories of the Social Readjustment Rating Questionnaire. Health care utilization was assessed by single questions based on recall of health care utilization during the past year. The questions addressing health care utilization and satisfaction with medical care have been used in a previous study (15) and proved to be very useful. (Because of its length the

TABLE 1. DISEASE CATEGORIES OF OTHER GASTROENTEROLOGY PATIENTS

Disease category	N	%
General (abdominal pain, functional complaints)	116	34.7
Esophagus	34	10.2
Stomach and duodenum	35	10.5
Liver	95	28.4
Pancreas	5	1.5
Small intestine	5	1.5
Colon	27	8.1
Cancer	7	2.1
Miscellaneous	10	3.0
Total	334	100%

questionnaire is not included in this paper; it is available on request.)

Scepticism toward medical care was measured with a three-item index developed by Suchman (16), which was tested for interitem reliability and found to have highly significant coefficients of correlation. Although this instrument has been widely used (17), the value of these coefficients is not provided. The items are: "I have doubts about some things doctors say they can do for you," "When I am ill, I demand to know all the details of what is being done to me," and "I believe in trying out different doctors to find which one I think will give me the best care."

Data analysis comparing IBD patients with the other patients was carried out using the statistical package SPSS (Statistical Package for Social Sciences) (18) and GLIM (Generalized Linear Interactive Modelling) (19). Descriptive statistics were calculated and, depending on the number of cases, chi-square or Fisher-exact tests were used to test association between variables. Logistic regression was used to adjust for the potential confounding effects of age and education.

RESULTS

Description of the Sample. Of the patients in the study, 65% were female. The average age of the study population was 43.4 years (range 11-93) with almost half being less than 40. The majority of patients were married (68%), employed (62%), and had completed high school (78%). The disease categories of the other gastroenterology patients are presented in Table 1.

Table 2 compares sociodemographic characteristics in IBD and in other patients. Consistent with the literature, IBD patients are younger ($P < 0.001$) and better educated ($P < 0.05$) than other patients. These results indicate that age and education may confound the relationship between diagnosis and the independent study variables. Therefore, adjustment will be made for these variables in the analysis.

TABLE 2. SOCIODEMOGRAPHIC VARIABLES IN IBD AND OTHER PATIENTS

	IBD (%)	Other (%)	P value unadjusted	P value adjusted for age and education
Age (% <40)	70.4	42.9	*	*
Education (% >high school)	62.3	49.1	†	†
Sex (% female)	57.4	60.5	NS	NS
Marital status (% married)	73.8	70.8	NS	NS
Employment status (% employed)	72.1	60.7	NS	NS
Income (% ≥\$30,000)	60.3	49.0	NS	NS

**P* < 0.001.

†0.001 < *P* < 0.05.

IBD patients frequently complain of a variety of serious symptoms, therefore health-related variables for IBD and other patients were compared. The results are shown in Table 3. Table 3 also indicates that these results remain significant after adjusting for age and education, using logistic regression.

Although the proportion of IBD patients reporting any stressful life events is significantly higher than the proportion of other patients (65.5% vs 49.5%, *P* < 0.05), and IBD patients also experience a greater number of stressful life events (42.7% experience ≥2 events vs 26.6%, *P* < 0.05), these differences disappear after adjusting for age and education.

Health Care Utilization. Of all the health care services studied, only a few were used more frequently by IBD patients than other patients during the past year (Table 4). Visits to a hospital emergency department were not significantly different for IBD and other patients after adjusting for age and education. Since IBD is a chronic disease, it is not surprising that IBD patients saw their gastroenterologist more frequently than other patients. In

part due to surgery or admission requiring intravenous therapy or nutritional supplementation, it was also to be expected that IBD patients spent more time in hospital. No other major differences in health care utilization were found.

Thirty-six patients consulted with an alternative practitioner for the same health problem for which they saw the gastroenterologist. Although the proportion of IBD patients consulting with an alternative practitioner for the same reason for which they saw the gastroenterologist (14.8%) was higher than the proportion of other patients (8.1%), this did not reach statistical significance. However, IBD patients were more likely than other patients to consult with herbalists (*P* < 0.05) or naturopaths (*P* < 0.05). Adjusting for age and education was not done, as these results apply only to a small number of patients. In another study (18), also carried out among gastroenterology patients attending the University of Calgary Gastroenterology Outpatient Clinic, secondary analysis showed that 41.7% (5/12) of IBD patients sought a second opinion versus 5.9% (15/232) of other patients (*P* < 0.001). Again,

TABLE 3. HEALTH-RELATED VARIABLES FOR IBD AND OTHER PATIENTS

	IBD (%)	Other (%)	P value unadjusted	P value adjusted for age and education
Duration symptoms (% >2 years)	73.3	37.8	*	*
Perceived health (% poor health)	27.0	11.0	†	†
Concern about health (% very much)	63.9	50.0	†	†
Frequency symptoms (% continuously)	23.2	21.8	NS	NS
Childhood health (% sick regularly or very often)	44.2	42.6	NS	NS

**P* < 0.001.

†0.001 < *P* < 0.05.

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TABLE 4. HEALTH CARE UTILIZATION FOR IBD AND OTHER PATIENTS DURING PAST YEAR

	IBD (%)	Other (%)	P value unadjusted	P value adjusted for age and education
Consulted ≥ 3 times with gastroenterologist	65.6	17.1	*	*
Visited hospital emergency department	55.7	40.1	†	NS
Spent >6 days in hospital	29.5	17.9	†	†
Consulted ≥ 2 with general practitioner	4.9	12.9	NS	NS
Visited ≥ 2 different specialists	19.7	13.6	NS	NS
Visited ≥ 2 hospital emergency department	9.8	9.3	NS	NS
Visited ≥ 2 medical clinic	8.2	8.4	NS	NS

* $P < 0.001$.

† $0.001 < P < 0.05$.

this applies to a very small number of patients, and therefore no adjustment was made for age and education.

Satisfaction with Health Care. No significant differences were found between the proportions of IBD and other patients who were satisfied with the medical care they received, or between the proportions of patients who felt that their physicians answered the questions they had regarding their disease. Lastly, no significant differences were found in the proportion of sceptical patients among IBD and among other patients.

Differences between Ulcerative Colitis and Crohn's Disease Patients. Because the disease is often more severe in Crohn's disease patients, an analysis was done to compare ulcerative colitis and Crohn's disease patients regarding the study variables. Of the 61 IBD patients, 43 were diagnosed with Crohn's disease and 18 with ulcerative colitis. No differences were found in sociodemographic characteristics, satisfaction with received health care, and the experience of stressful life events. The major differences concern health-related variables. Crohn's disease patients more often perceive their health to be fair or poor than ulcerative colitis patients (62.7% vs 27.8%, $P < 0.01$) and are more concerned about their health than ulcerative colitis patients (88.3% vs 61.1%, $P < 0.05$). The only measured difference in health care utilization is that the proportion of Crohn's disease patients going to a medical clinic other than the gastroenterology clinic is larger than the proportion of ulcerative colitis patients (44.2% vs 12.5%, $P < 0.05$). This might well be related to the fact that Crohn's disease patients perceive themselves to be sicker than ulcerative colitis patients or it may be that Crohn's disease patients have more extraintestinal problems. However, this does not explain why they

use medical clinics more and do not use other health care services, such as their general practitioner, more often.

DISCUSSION

This study demonstrates that IBD patients differ from other gastroenterological patients in several respects. The validity of these results is strengthened by the fact that, with only one exception, all these relationships also were found in a secondary analysis of the data of another study among patients attending the University of Calgary Gastroenterology Outpatient Clinic (15). The exception refers to a significant difference in perception of childhood health: nine of 12 IBD patients (75%) were sick regularly, versus 103 out of 253 (40.7%) of other patients ($P < 0.05$).

Although IBD patients use certain health care services more often than other patients, they appear to know what type of care they are looking for and they do not seem to use the health care system indiscriminately. They especially use their own gastroenterologist, perhaps as a primary care physician. When they want a second opinion, they consult another gastroenterologist, not another specialist. The specific types of alternative medical care that IBD patients use more often (naturopaths and herbalists) are types that are related to nutrition, an important aspect of the therapy for IBD patients.

For the gastroenterologist, it is important to know that IBD patients mainly depend and seem to rely on him or her and that they feel sicker than other patients. Despite their chronic illness, they are just as satisfied with the care they receive.

Even though the alternative medicine study was not designed to study health care utilization of IBD

patients, most of the required variables were included in this study. Unfortunately, no information on the annual cost of treatment was available. This information would be important for health care planners. It also was not possible to distinguish between patients with active and inactive disease, although the fact that they visited the clinic may be an indication of some activity of the disease. Further follow-up studies are required, and the present study could serve as a starting point for them.

Because the selected control group is not in every respect the best comparison group, future studies also should consider the inclusion of different control groups such as patients with other chronic diseases. This would allow conclusions covering a larger range of patients.

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