PUTTING THE FOCUS ON INFLAMMATORY BOWEL DISEASE

UNDERSTANDING THE IMPACT OF COMPLEX CHRONIC DISEASES BEYOND DIABETES AND HYPERTENSION
WHAT IS INFLAMMATORY BOWEL DISEASE (IBD)?

IBD INCLUDES 2 CHRONIC AUTOIMMUNE DISEASES THAT CAN INVOLVE INFLAMMATION OF ALL OR PART OF THE DIGESTIVE TRACT

Crohn’s disease (CD) can affect any part of the digestive tract

Two major types

Ulcerative colitis (UC) affects the large intestine and rectum

CD AND UC ARE LIFELONG CONDITIONS WITH NO CURE

Both diseases are associated with:

- **Frequent bowel movements**
- Periods of flares and remission
- **Increase in risk for colorectal cancer**
- **Destructive inflammation** and serious complications
WHAT ARE THE SYMPTOMS OF IBD?

PATIENTS WITH CD AND UC MAY EXPERIENCE MANY OF THE SAME SYMPTOMS\textsuperscript{5}

Symptoms of CD and UC include

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>CD</th>
<th>UC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal pain</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Anemia</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Anorexia</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Blood and mucus in stool</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Fever</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Weight loss</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

THESE SYMPTOMS MAY IMPACT A PATIENT’S ABILITY TO WORK\textsuperscript{6}

From a survey of 5576 members of 7 national IBD organizations affiliated with the European Federation of Crohn’s and Ulcerative Colitis Associations

<table>
<thead>
<tr>
<th>Impact of IBD symptoms</th>
<th>Patients with CD</th>
<th>Patients with UC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experienced flare-ups every few months</td>
<td>71.0%</td>
<td>67.7%</td>
</tr>
<tr>
<td>Affected ability to perform job functions</td>
<td>71.7%</td>
<td>65.6%</td>
</tr>
<tr>
<td>Caused change in job or job responsibilities</td>
<td>37.6%</td>
<td>27.6%</td>
</tr>
</tbody>
</table>

UNFORTUNATELY, PATIENTS WITH IBD ARE OFTEN MISDIAGNOSED\textsuperscript{7}

- IBD is sometimes confused with irritable bowel syndrome (IBS)\textsuperscript{7}
- While symptoms are similar, IBS does not cause inflammation and does not lead to irreversible damage of the intestines, or the harmful complications caused by IBD, such as an increased risk of colorectal cancer\textsuperscript{4}
WHO GETS IBD?

THE INCIDENCE OF IBD IN THE UNITED STATES IS INCREASING

Estimated Number of Americans With IBD:
3 million (2015)\textsuperscript{8*}

Estimated New Cases of IBD Every Year:
+ As many as 70,000\textsuperscript{2}

IBD ONSET HAPPENS AT A YOUNG AGE\textsuperscript{2}
- Average age of peak onset is \textbf{15 to 35 years of age}, although the disease can present at any time

OTHER RISK FACTORS ASSOCIATED WITH IBD
- IBD is found more often in northern climates and in urban areas\textsuperscript{2}
- IBD is more common in Caucasian and Ashkenazic Jewish people\textsuperscript{9}
- \textbf{CD} and \textbf{UC} affect both men and women—\textbf{UC} is more common in men\textsuperscript{2,9}

NEARLY 2% OF YOUR MEMBERS 45-64 YEARS OF AGE MAY HAVE IBD\textsuperscript{8†}

\textsuperscript{8} Based on aggregated survey data from the 2015 and 2016 National Health Interview Survey (NHIS), a cross-sectional household health survey of the civilian, noninstitutionalized population in the United States.\textsuperscript{8}

\textsuperscript{†} Age-adjusted % (95% confidence interval [CI]): 45-64 years of age, 1.5%. Estimates are age-adjusted using the projected 2000 US population as the standard population.\textsuperscript{8}
WHAT ARE THE HEALTH RISKS OF IBD?

OTHER SERIOUS CONDITIONS ARE ASSOCIATED WITH IBD, EACH REQUIRING SPECIALIZED CARE

Additional chronic inflammatory conditions are higher in patients with IBD than in those without.10

- **1.5x MORE LIKELY** to have Asthma
- **1.7x MORE LIKELY** to have Psoriasis
- **1.9x MORE LIKELY** to have Rheumatoid Arthritis
- **2.3x MORE LIKELY** to have Multiple Sclerosis

Patients with IBD are also at risk for other conditions.8

- **Cardiovascular disease**
  Reported **1.6x** (more frequently by adults with IBD) than by those without IBD.8
- **Serious psychological distress**
  Reported **2.2x** (more frequently by adults with IBD) than by those without IBD.8
- **Any liver dysfunction**
  Reported **3.1x** (more frequently by adults with IBD) than by those without IBD.8
- **Ulcers**
  Reported **4.7x** (more frequently by adults with IBD) than by those without IBD.8

---

*Based on a large, US cross-sectional study: asthma (odds ratio [OR] 1.5, 95% CI 1.4–1.6), psoriasis (OR 1.7, 95% CI 1.5–2.0), rheumatoid arthritis (OR 1.9, 95% CI 1.5–2.3), and multiple sclerosis (OR 2.3, 95% CI 1.6–3.3).10

†Based on aggregated survey data from the 2015 and 2016 National Health Interview Survey (NHIS), a cross-sectional household health survey of the civilian, noninstitutionalized population in the United States.8

‡Statistically significant (p<0.05) difference between adults with IBD and adults without IBD. Estimates were age-adjusted using the projected 2000 US population as the standard population and 4 age groups: 18–24, 25–44, 45–64, and ≥65 years.8

§Age-adjusted % (95% CI), adults with IBD: 19.2 (16.3–22.5), adults without IBD: 12.0 (11.7–12.4). Cardiovascular disease included a history of any of the following conditions: coronary heart disease, angina, myocardial infarction, stroke, or any heart disease.8

¶Age-adjusted % (95% CI), adults with IBD: 7.4 (5.4–10.0), adults without IBD: 3.4 (3.2–3.6). Serious psychological distress was based on responses to 6 questions that asked how often a respondent experienced certain symptoms (feeling so sad nothing could cheer you up; nervous; restless or fidgety; hopeless; that everything was an effort; worthless) of psychological distress during the past 30 days.8

#Age-adjusted % (95% CI), adults with IBD: 26.0 (22.2–30.3), adults without IBD: 5.5 (5.3–5.7). Any liver condition was defined as an affirmative response to the question “During the past 12 months, have you been told by a doctor or other health professional that you had any kind of liver condition?”8

*Age-adjusted % (95% CI), adults with IBD: 26.0 (22.2–30.3), adults without IBD: 5.5 (5.3–5.7). Ulcer was defined as an affirmative response to the question “Have you ever been told by a doctor or other health professional that you had an ulcer?”8

---
WHAT ARE THE COSTS ASSOCIATED WITH IBD?

IN 2014, HEALTH CARE COSTS FOR IBD RANDED FROM $14.6-$31.6 BILLION\(^\text{11}\)

One-year health care costs for a patient with IBD were up to \textbf{5 times higher} than the average costs for a commercially insured patient without IBD\(^\text{12}\)

CROHN’S DISEASE\(^\text{13*}\)

\(~$25,737 \text{ TOTAL COSTS PER PATIENT/YEAR}\)

Direct costs $18,477

ULCERATIVE COLITIS\(^\text{14†}\)

\(~$19,619 \text{ TOTAL COSTS PER PATIENT/YEAR}\)

Direct costs $15,548

\(^*\text{Results were obtained through a systematic review of 33 full papers and 5 abstracts on the cost of CD.}\)^{13}

\(^†\text{Data for 41 US-based large companies were utilized from the OptumHealth Reporting and Insights claims database from 2005-2013. A generalized linear model regression were used to estimate the impact of disease on the magnitude of costs. The model controlled for factors that were significantly different (}\text{p}<0.05\text{) between UC patients and controls at baseline.}\)^{14}
HOW DOES IBD IMPACT HEALTHCARE UTILIZATION?

PATIENTS WITH IBD HAVE HIGHER RESOURCE UTILIZATION THAN PATIENTS WITHOUT IBD

IBD was the cause of

Based on an analysis of a large claims database when compared with control patients without IBD*:

- Patients with **CD** had ~5 **additional office visits** per year
- Patients with **UC** had ~3.6 **additional office visits** per year

Surgical treatment substantially increases the costs of care

- **75%** of patients with **CD** and **25%** with **UC** will eventually require surgery
  - **CD** patients incurred nearly 4x the costs of those not requiring surgery ($60,146 vs $15,698)
  - **UC** patients incurred nearly 6x the costs of those not requiring surgery ($72,415 vs $12,822)

**EMERGENCY DEPARTMENT (ED) USE IS GREATER THAN THAT OF NON-IBD PATIENTS**

Data from 2003 and 2004*:

- Patients with **CD** had >20 **additional ED visits** per 100 patients each year \(P<0.001\)
- Patients with **UC** had >10 **additional ED visits** per 100 patients each year \(P<0.001\)

---

*Inpatient, office-based, emergency, and endoscopy services occurring in 2003 and 2004 in 9056 patients with CD, 10,364 patients with UC, and 52,989 controls were matched for age, gender, and region from 87 different health plans in 33 states. Mean annual ED visits per 100 patients with CD was 36.0, vs 15.1 for the CD controls. Mean annual ED visits per 100 patients with UC was 26.2 vs 15.7 for the UC controls.

†Mean 12-month expenditures; \(P<0.001\)
WHAT IS THE EFFECT OF IBD ON ABSENCE AND PRODUCTIVITY?

EMPLOYEES WITH IBD WERE FOUND TO BE MORE LIKELY TO MISS TIME FROM WORK THAN PATIENTS WITHOUT IBD\(^{18}\)

From an analysis of US Medical Expenditure Panel Survey data of employed individuals aged 18-64 years (1996-2006)\(^ {18}\):

- Greater probability of **missing time from work** due to illness
  - 71.5\% vs 58.2\% (\(P<0.001\))
- **Lose more work days** annually
  - 13.38 vs 9.89 days (\(P=0.044\))

THEY MAY BE LESS PRODUCTIVE AT WORK

From a survey of 146 employed patients with IBD attending the UCLA Center for Inflammatory Bowel Diseases\(^ {19}\):

- **6 out of 10** employees admitted to having gone to work while sick\(^ {19}\)
- **nearly 5 out of 10** employees said their work performance had been affected by fatigue\(^ {19}\)

EMPLOYEES WITH IBD MAY UTILIZE MORE DISABILITY BENEFITS

- Employees with IBD were **more than twice as likely** to receive short-term disability benefits than those without IBD\(^ {11}\)
- 16\%–27\% of employees with CD and 13\%–18\% of employees with UC reported **receiving long-term disability benefits**\(^ {20}\)

IBD CAN HAVE **SIGNIFICANT EFFECTS ON DISABILITY BENEFITS AND WORK PRODUCTIVITY**\(^ {18-20}\)

\(^{*}\)Based on a systematic review of 14 published studies originating in Australia, Canada, Greece, Spain, Switzerland, The Netherlands, Finland, and Sweden.\(^ {20}\)
WHAT DO MEMBERS WITH IBD NEED TO DO?

TAKE ACTION—RECOGNIZE SYMPTOMS AND SEEK THE CARE OF A SPECIALIST

- An accurate diagnosis is best achieved by a gastroenterologist, particularly one who specializes in IBD.
- It may take up to 2 years after symptom onset before IBD is correctly diagnosed.

MANY PATIENTS WITH IBD ARE NOT DIAGNOSED RIGHT AWAY

Results from one case-control study from a general practice research database in the United Kingdom suggest that about 10% of IBD patients receive a misdiagnosis of IBS prior to being diagnosed with IBD.

AT TIME OF DIAGNOSIS

Potential consequences of delayed diagnosis:
- Irreversible damage to intestine as early as 4 months.
- Increased need for surgery.
- Increased use of ED services.

MEMBERS NEED EDUCATION AND ACCESS TO CARE FROM SPECIALISTS WHO CAN DIAGNOSE AND MANAGE THEIR COMPLEX DISEASE
WHAT SHOULD AN EMPLOYER DO?

BE SURE YOUR MEMBERS WITH IBD HAVE ACCESS TO THE SUPPORT, EDUCATION, AND CARE THEY NEED

**STEP 1:** Talk to your benefits partners about the right plan design to ensure access to appropriate care

- Members with IBD may need care from a team of health care providers who specialize in IBD and its complications
  - For example, gastroenterologists, IBD specialists, nutritionists, and dieticians

- Ensure access to laboratory services for diagnosis, disease assessment, and monitoring
  - For example, blood tests, endoscopy, imaging

- Medication, including specialty medications, may be needed for the management of IBD

- Some members will require medical procedures such as surgery

- Additional supportive care may be needed

**STEP 2:** Provide your members with appropriate educational resources

- To help those who are undiagnosed seek the care they need
- To help those diagnosed with IBD better manage their condition
WHAT RESOURCES CAN YOU PROVIDE TO YOUR EMPLOYEES?

DISTRIBUTE EDUCATIONAL RESOURCES THAT SUPPORT AND EMPOWER MEMBERS WITH IBD

Brochures and websites you can provide to your employees.

Helping a Loved One Cope With Inflammatory Bowel Disease (IBD)
Living a Healthy Lifestyle With Inflammatory Bowel Disease (IBD)
Inflammatory Bowel Disease (IBD): Making the Most of the Relationship With Your Gastroenterologist

Crohn's & Colitis
https://www.crohnsandcolitis.com

Crohn's & Colitis Foundation
http://www.crohnscolitisfoundation.org
INFLAMMATORY BOWEL DISEASE IS A CHRONIC, DEBILITATING DISEASE THAT MAY BE AFFECTING EMPLOYEE PERFORMANCE IN YOUR ORGANIZATION

References