



## Common Drug Review *Patient Group Input Submissions*

**vedolizumab (Entyvio)** for the treatment of adult patients with moderately to severely active Crohn's disease who have had an inadequate response with, lost response to, or were intolerant to immunomodulators or a tumor necrosis factor-alpha (TNF) antagonist; or have had an inadequate response, intolerance, or demonstrated dependence on corticosteroids.

Patient group input submissions were received from the following patient groups. Those with permission to post are included in this document.

Crohn's and Colitis Canada — permission granted to post.

GI (Gastrointestinal) Society — permission granted to post.

### **CADTH received patient group input for this review on or before May 12, 2016**

CADTH posts all patient input submissions to the Common Drug Review received on or after February 1, 2014 for which permission has been given by the submitter. This includes patient input received from individual patients and caregivers as part of that pilot project.

The views expressed in each submission are those of the submitting organization or individual; not necessarily the views of CADTH or of other organizations. While CADTH formats the patient input submissions for posting, it does not edit the content of the submissions.

CADTH does use reasonable care to prevent disclosure of personal information in posted material; however, it is ultimately the submitter's responsibility to ensure no personal information is included in the submission. The name of the submitting patient group and all conflict of interest information are included in the posted patient group submission; however, the name of the author, including the name of an individual patient or caregiver submitting the patient input, are not posted.

## Crohn's and Colitis Canada

### Section 1 — General Information

<b>Name of the drug CADTH is reviewing and indication(s) of interest</b>	Vedolizumab (Entyvio) for Crohn's Disease
<b>Name of the patient group</b>	Crohn's and Colitis Canada
<b>Name of the primary contact for this submission:</b>	[REDACTED]
Position or title with patient group	[REDACTED]
Email	[REDACTED]
Telephone number(s)	[REDACTED]
<b>Name of author (if different)</b>	
<b>Patient group's contact information:</b> Email	[REDACTED]
Telephone	[REDACTED]
Address	600-60 St. Clair Avenue East, Toronto, Ontario M4T 1N5
Website	<a href="http://www.crohnsandcolitis.ca">www.crohnsandcolitis.ca</a>
<b>Permission is granted to post this submission</b>	Yes

#### 1.1 Submitting Organization

Crohn's and Colitis Canada is the only national, volunteer-based charity focused on finding the cures for Crohn's disease and ulcerative colitis, the two main forms of inflammatory bowel disease (IBD), and improving the lives of children and adults affected by these diseases.

Crohn's and Colitis Canada is one of the top health charity funders of Crohn's and colitis research in the world, investing over \$94 million in research since our founding in 1974. The organization also delivers on its promise through patient programs, advocacy and awareness. We help improve the quality of lives today by:

- sharing accurate and reliable information on treatments, research and issues related to life with Crohn's and colitis through website, print materials, webinars and live events;
- increasing public washroom access through the go-here.ca decal and free mobile app;
- raising awareness about these Canadian diseases with bilingual public advertising campaign via TV, print, radio and digital carriers;
- offering kids with Crohn's or colitis camp experience; and
- providing an online peer support program to newly diagnosed people.

Crohn's and Colitis Canada is comprised of approximately 65,000 supporters including volunteers, donors or individuals interested in engaging with the organization. There is no paid membership. Crohn's and Colitis Canada is governed by a national volunteer Board of Directors. The organization has a network of volunteer-led Chapters in 45 communities across the country, offering information, events, fundraising opportunities and encouragement. There are thousands of volunteers from coast-to-coast supporting Crohn's and Colitis Canada's mission.

### 1.2 Conflict of Interest Declarations

a) *We have the following declaration(s) of conflict of interest in respect of corporate members and joint working, sponsorship, or funding arrangements:*

In the fiscal year 2014-2015, Crohn's and Colitis Canada received less than 11% of its total revenue from pharmaceutical companies. The non-restricted grants are used to sponsor patient education events, research and medical conferences, educational brochures, youth camps and post-secondary scholarships for inflammatory bowel disease (IBD) patients. The majority of Crohn's and Colitis Canada's funding comes from individual donors contributing to fundraising events including the annual Gutsy Walk.

b) *We have the following declaration(s) of conflict of interest in respect of those playing a significant role in compiling this submission:*

None of the pharmaceutical companies have played a role in contributing to this submission. This patient input submission was developed and prepared solely by the staff at Crohn's and Colitis Canada.

## Section 2 — Condition and Current Therapy Information

### 2.1 Information Gathering

The information summarized in this section was compiled from a variety of sources. Information was drawn from the Crohn's and Colitis Canada (CCC) published reports, including the 2012 "Impact of Inflammatory Bowel Disease (IBD) Report" and informational brochures found on the organization's website. Statistical evidence was taken from a CCC 2011 national online survey that explored the physical, social and economic impacts of living with IBD. Over 430 people across the country participated in this survey. Additionally, one-on-one telephone interviews were conducted with 11 Canadian patients, currently taking vedolizumab, who participated in the clinical trial.

### 2.2 Impact of Condition on Patients

Crohn's disease is a disabling, life-long gastrointestinal condition that primarily affects working-age Canadians. Crohn's and ulcerative colitis, together, are twice as common as multiple sclerosis or Parkinson's disease and are about as common as Type 1 diabetes or epilepsy. Sadly, Canada has a rate that ranks highest in the world. New evidence suggests that these diseases are now escalating in children at an alarming rate, especially those under 10 years old. Over the past 15 years, the number of children with Crohn's and colitis has increased by more than 40%. With an expected 10,200 new diagnoses every year, in addition to the nearly quarter of a million Canadian living with Crohn's and colitis, these diseases are becoming increasingly prevalent in Canada.

Overall, Canadians have more reasons to be concerned about Crohn's and colitis than anyone else in the world. With one in every 150 Canadians being diagnosed with Crohn's disease and ulcerative colitis - the two most common forms of Inflammatory Bowel Disease (IBD) - these conditions are becoming "Canada's diseases". Families new to Canada, predominantly those of South Eastern Asian descent, are developing Crohn's and colitis for the first time – often within the first generation. The burden that Crohn's disease and ulcerative colitis place on individuals and the healthcare system is significant and will continue to grow as the number of people diagnosed increases.

Crohn's disease symptoms include bloody diarrhea, bloating, abdominal pain and fatigue. The majority of interviewees pointed out frequent and urgent bowel movements as the most frustrating symptom they experience. This corresponds with results based on a Crohn's and Colitis Canada 2011 survey where

73% of respondents affected by IBD said they experienced between five to 20 or more bowel movements a day. Some expressed concern about the increased risk of colon cancer with longstanding Crohn's disease. During times of active disease (flare ups), patients spend a lot of time in the bathroom. Even during times of remission, people with IBD feel that they can't be too far away from the bathroom. Blood in the stool and abdominal pain were noted as important aspects of the disease, however bathroom access dominated concerns since it changed people's lifestyle. As one interviewee stated, "when you have to go to the washroom 20 times a day, it impacts everything you do." Another says, "When the disease takes control of your body, you feel very tired. When my large bowel is affected, I get diarrhoea quick and practically live in the bathroom. It plays havoc with my head, I can't sleep and I get headaches and other problems as a result."

People living with Crohn's disease must limit their activities. The disease makes it challenging to work. "You simply can't lead a normal life of working and going to the office." For others, "Crohn's disease hampered my ability to earn a living." Because of the stigma associated with these diseases, it is difficult for an individual to disclose their condition.

According to a Crohn's and Colitis Canada's 2012 publication, *The Impact of IBD Report*, 43% of employed people with Crohn's and colitis took time off work per year, and each employed person with either colitis or Crohn's disease took 7.2 days off per year due to their chronic condition. The report also highlights that people with colitis or Crohn's disease are more likely to have lower labour participation rates than the general population, ranging from three to 13% less employment. Caregiver work absences in Canada are estimated to cost \$7 million per year for parents of paediatric IBD cases, plus \$86 million per year for severely ill people with IBD.

When patients are not receiving effective treatments, they must limit their activities such as going out to dinners, movies and concerts, doing physical activities and using the public transportation system. Thirty-four per cent of survey respondents frequently missed out on playing sports, 22% missed school trips, 20% skipped family vacations, 40% avoided parties and 22% did not attend special events, which includes graduations or family weddings. One interviewee missed the first few months of her newborn son's life because she was hospitalized because of her disease. This is time lost that she will never gain back

### **2.3 Patients' Experiences With Current Therapy**

Canadians have one of the highest rates of prevalence of Crohn's disease, however, when compared with other Western countries, there are fewer treatment options available for people with moderate to severe forms of Crohn's. Once diagnosed, patients are often prescribed first line treatments that include anti-inflammatory class of drugs (5-ASA, mesalamine) together with corticosteroids used to control flares. For those who are unresponsive or develop a moderate to severe form of IBD, second line treatments usually consist of immune-modulators/immunosuppressants (azathiopurine), sometimes together with corticosteroids and biologics. These classes of medication work to reduce inflammation by suppressing the immune system.

These drugs often work well for those experiencing mild to moderate levels of Crohn's disease, but often fail in maintaining remission for those experiencing severe forms. For some interviewees, these treatments kept their condition in remission for long periods of time at early stages of their disease, and for others using aminosalicylates or immunosuppressants the treatments did not change their symptoms and overall condition.

Most did not report experiencing side effects in taking the aminosalicylates. One interviewee reported liver problems arose from taking immunosuppressants (azathiopurine). The majority of those interviewed did report numerous side effects from steroid use. Most common cited effects included mood swings (easily angered), moon face, and weight gain. One interviewee mentioned that Predisone use, with 16 pills a day, made him feel better by 60% but never ended bloody stools. It also led to the development of cataracts in both eyes. The negative impact of steroid use over the long term, including increased mortality and morbidity, is well documented in scientific literature.

For those interviewed, initially these treatments would help to relieve some symptoms but it did not control their symptoms, including the constant and urgent use of the washrooms. Furthermore, none of those interviewed achieved remission. One interviewee stated that because of the protocol from his private insurer, he had to go through first line available therapies before he could get access to the biologic drug that worked for him. It took him three years to go through this process also taking a toll on his mental well-being and disease progression.

People experiencing severe forms of Crohn's may be prescribed anti-TNF biologics that inhibit immune system molecules involved in the inflammatory pathway. What makes vedolizumab unique is that it is the only biologic that is specifically targeting the gut and as such it provides another available option for people who fail on current available biologic options. In fact, many of the interviewees became unresponsive to currently approved anti-TNF biologics. Other interviewees were considering surgery to remove their colon as an option of last resort when they failed on anti-TNF biologics, until they had success with vedolizumab. Entyvio for many, is their last working option.

People living with Crohn's require access to a wide variety of therapies and treatments since not all respond well to current options while others may eventually lose response due to antibody formation.

Vedolizumab is a new mode of Crohn's treatment that targets different inflammatory mechanisms. Accordingly, medical experts and their patients demand a variety of biologics that target different mechanisms, otherwise patients who lose response are left with the remaining option of surgical removal of the colon. Patients should work with their doctor to get personalized treatment and get access to the right treatment at the right time.

Based on the Impact of IBD Report, more than half of Crohn's disease patients have received surgery. Some patients can opt for additional surgeries however, surgery does not improve the quality of life. Post-surgery complications include soiling, poor pouch function, pouchitis and sexual dysfunction. Unfortunately, many females who undergo surgery are at an increased risk of losing fertility. Surgery is unpleasant and is often the last resort, because of limited drug treatments available and sponsored by public programs. One male interviewee stated that "proposing surgery as a viable treatment option is inhumane and not fair. Surgery should be considered an option of last resort. It is a shame that there is nothing else to take."

### **Impact on Caregivers**

For caregivers affected by Crohn's disease, caring comes with challenges. Absences from work, high costs of care, fatigue and stress can take a toll on the caregiver's mental health and physical well-being. Caregivers often act as advocates for their loved ones and take on the burden of care, including financial out-of-pocket costs associated with managing these diseases. The overall cost of caregiving for people living with severe forms of Crohn's and colitis is estimated to be at \$86 million annually.

With increasing numbers of children being diagnosed with IBD, parents play an important caregiver role. Based on the Impact of IBD Report, the caregiver costs for parents of children living with Crohn's and colitis totalled \$7 million for the estimated 5,900 children with IBD in Canada in 2012.

### **Section 3 — Information about the Drug Being Reviewed**

#### **3.1 Information Gathering**

Information was drawn from the Crohn's and Colitis Canada (CCC) published reports, including the 2012 "Impact of Inflammatory Bowel Disease (IBD) Report" and informational brochures found on the organization's website. Crohn's and Colitis Canada staff interviewed people living with Crohn's disease who continue to participate in the clinical trials for the current vedolizumab (Entyvio) therapy.

#### **3.2 What Are the Expectations for the New Drug or What Experiences Have Patients Had With the New Drug?**

As one interviewee stated, "the medicine is doing its job". Vedolizumab (Entyvio) is a new class of treatment that targets different inflammatory mechanisms than the currently approved anti-TNF inhibitor biologics. Vedolizumab offers people with severe forms of Crohn's disease a new treatment option, other than surgery, to help them manage their disease well. According to those interviewed, it has significant improvements in symptom relief and achieves remission within the first four to six weeks of receiving treatment. "I felt really good since day one. No pain, diarrhea is under control. This is the only drug I've taken that has lasted so long and with no side effects," said an interviewee.

It is expected that with new and proven biologics, many people with Crohn's disease will be able to have a 'normalized' life and these diseases will become a minor inconvenience. Remission is a significant achievement since individuals no longer need to plan their activities and lives around sudden washroom visits. People can focus on work and build their career paths. Young students will be able to focus on school and socialize with other children. And for many women wishing to have children, the introduction of a new targeted biologic treatments will avoid surgery – a treatment option that decreases fertility rates. Research has demonstrated that flare-ups can also lead to a decreased rate of fertility.

With advancements of new medications, there is reduced need for surgery. In the case of Crohn's disease, surgical rates have been falling as well as the rates of hospitalization. The Impact of IBD Report attributes the drop in surgeries to the increased availability of biologics and immunosuppressants.

Patients worry about the potential cost of the drug and the possibility that they may not be able to afford treatment without adequate private or public insurance coverage. Patients currently on the clinical trial wonder if there will be infusion clinics closer to their homes and expressed concern about coverage on public drug programs and whether they will be grandfathered into these programs, as they are unable to financially support the costs to continue on these life-changing treatments.

Those interviewed that were part of the vedolizumab clinical trial did not report side effects. Overall, interviewees felt better and did not need to visit the bathroom as frequently as before they were taking vedolizumab. One interviewee had a recent colonoscopy completed and reported that there was no inflammation found in his colon. He said, "Had I not found vedolizumab, surgery would have been my only option. Vedolizumab gave me a normal life back. With steroids I was at 60% but with vedolizumab, I'm at 95%." All ten interviewees were in remission and none experienced any flare-ups since taking vedolizumab. Interviewees say they feel they can live their lives without any restrictions. One interviewee, when describing the drug said, "To me vedolizumab is like insulin for diabetes."

Vedolizumab is a drug that is administered by infusion. Some expressed that this is a minor issue since benefits by far outweigh the trouble of travelling to a clinic to receive infusions. This is no different than other biologics that require visits to infusion clinics.

Another interviewee who works in the construction industry shared his concern about wanting public coverage of the drug. “In the construction business when you have a flare up, you get tired and work becomes harder to do, staying home is not an option. In this work environment I don’t get understanding or empathy when I want to go the bathroom. I want this drug to get approved because for people like me there is no coverage from work. You have to look at the drug from the benefit it provides rather than the costs because when you are at 100% you don’t need to worry about being sick, feeling tired and wondering about who is going to take care of your kids.”

It is imperative to stress that unlike other available anti-TNFs, vedolizumab (Entyvio) is the first gut-specific biologic for Crohn’s disease. With clinical data supporting its use for those who have failed on TNF alpha inhibitors and new patients with severe forms of IBD, vedolizumab will be a much-needed treatment option to the thousands of Canadians with Crohn’s disease who continue to experience unmet treatment needs that often result in hospitalization, surgery and a diminished quality of life.

## GI (Gastrointestinal) Society

### Section 1 — General Information

<b>Name of the drug CADTH is reviewing and indication(s) of interest</b>	Entyvio® (vedolizumab) for Crohn’s disease
<b>Name of patient group</b>	GI (Gastrointestinal) Society
<b>Name of primary contact for this submission:</b>	██████████
Position or title with patient group	██████████
Email	██████████
Telephone number(s)	604-873-4876
<b>Name of author (if different)</b>	
<b>Patient group’s contact information:</b>	
Email	info@badgut.org
Telephone	604-873-4876
Address	231-3665 Kingsway, Vancouver, BC V5R 5W2
Website	<a href="http://www.badgut.org">www.badgut.org</a>
<b>Permission is granted to post this submission</b>	Yes

#### 1.1 Submitting Organization

Our mission: As the Canadian leader in providing trusted, evidence-based information on all areas of the gastrointestinal tract, the GI (Gastrointestinal) Society is committed to improving the lives of people with GI and liver conditions, supporting research, advocating for appropriate patient access to health care, and promoting gastrointestinal and liver health.

Canadian health care professionals request more than 550,000 of our BadGut® Basics patient information pamphlets each year, and tens of thousands of Canadians benefit from our important quarterly publication, the Inside Tract® | Du coeur au ventreMC newsletter.

Our free BadGut® Lectures from coast to coast cover various digestive conditions for patients, caregivers, and other interested individuals. We also have dynamic websites in English ([www.badgut.org](http://www.badgut.org)) and French ([www.mauxdeventre.org](http://www.mauxdeventre.org)). Organized on a number of topics, GI Society support group meetings offer a wealth of information for those newly diagnosed with a gastrointestinal disorder, as well as those who have lived with a condition for years.

Our highly trained staff and volunteers offer additional patient resources, including responding to information requests and participating in community initiatives. Staff and advisors work closely with health care professionals, other patient groups, and governments at all levels on behalf of GI patients. In addition, we occasionally hold continuing education events for pharmacists, nurses, dietitians, and physicians. The GI Society, along with its sister charity, the Canadian Society of Intestinal Research (CSIR – founded in 1976), has supported a number of significant clinical, basic, and epidemiological research projects in the field of gastroenterology.



### 1.2 Conflict of Interest Declarations

a) *We have the following declaration(s) of conflict of interest in respect of corporate members and joint working, sponsorship, or funding arrangements:*

The GI Society receives financial contributions from pharmaceutical companies in support of our independent charitable work for Canadians affected by GI/liver conditions. Supporters have no input into the editorial content of our resource material, which is approved by the GI Society's Medical Advisory Council (made up of GI/liver health experts only). Charitable donations or grants, sponsorships, subscriptions to the *Inside Tract*® newsletter, etc. from pharma within the last two years include: AbbVie Corporation, Actavis, AstraZeneca Canada Inc., Innovative Medicines Canada, Ferring Inc., Gilead Sciences Canada Inc., GlaxoSmithKline Inc., Janssen Canada, Merck Canada Inc., Pfizer Canada Inc., Shire Canada Inc., and Takeda Canada Inc.

b) *We have the following declaration(s) of conflict of interest in respect of those playing a significant role in compiling this submission:*

None. The GI Society has solely prepared this submission entirely independently of any outside groups or individuals.

## Section 2 — Condition and Current Therapy Information

### 2.1 Information Gathering

This information was obtained primarily through a questionnaire completed by 133 Canadians (English: 105 and French: 28) with IBD (or their caregivers or family members), contact with patients affected by IBD, one-to-one conversations within the community during our BadGut® Lectures, which 1,245 individuals with Crohn's disease and ulcerative colitis attended, at a patient roundtable, from patients who submitted their stories over time, from patient volunteers, and is guided by the expertise of our health care professional council and advisors (gastroenterologists, pharmacists).

### 2.2 Impact of Condition on Patients

Inflammatory bowel disease (IBD) is a term that primarily refers to two diseases of the intestines: Crohn's disease and ulcerative colitis. These both involve inflammation of the digestive tract, which is limited to the inner mucosa of the colon in ulcerative colitis, but can include any area of the GI tract and can extend through the entire thickness of the bowel wall in Crohn's disease.

Crohn's disease can arise at any age, commonly occurring in young people, such that about 10% of newly diagnosed cases each year are in children. There is an increased risk for those who have a family member with the condition. Currently, Canada has the highest prevalence and incidence yet reported in the world, with approximately 129,000 diagnosed individuals. Patients are at a slightly increased risk for colorectal cancer after having Crohn's disease for about 10-15 years.

The most frequent symptom is diarrhea, often accompanied by cramping abdominal pain. Rectal bleeding, in varying amounts, occurs in most patients with inflammation in the colon, where blood is obvious within and covering the stool. Low red blood cell count (anemia) can result if diarrhea and blood loss are severe. Individuals with Crohn's disease can also experience weight loss, along with delayed development in children with the disease.

Some patients have extra-intestinal manifestations, including fever, inflammation of the eyes or joints (arthritis), ulcers of the mouth or skin, tender and inflamed nodules on the shins, and numerous other conditions. Anxiety and stress are major factors.

Crohn's disease often has a profound effect on an individual's life – physically, emotionally, and socially, both at home and at school or in the workplace. It is particularly difficult for children and young adults since it often affects a person's sense of self.

More than anything, patients have told us that sustained remission/treatment response is more important than relieving any one symptom of Crohn's disease. As a chronic disease, it is never just one flare that dominates the impact of the disease, but the constant concern that there will be future flares, possibly worse than the last, and at unpredictable times, which can disastrously disrupt patients' lives.

In our survey, IBD patients shared the following regarding the impact that their disease has on all aspects of their day-to-day lives, including work life, family life, social life, and normal activities:

- "I am constantly aware of where a bathroom is and always prepared for the urge to go. My activities are limited for the fear of not being able to find a washroom."
- "I don't want to do anything since this has total control over my life."
- "The biggest change is lifestyle. I need more sleep and rest. My diet is better but there are activities which I avoid or try to limit, such as camping."
- "My most important concern is the overall fatigue I feel. I am also always very worried when I see blood in the stool. Having to watch my diet is something I never had to do before - seems like I cannot eat much anymore."
- "It makes it difficult to leave my house, play with my son, work, etc when I am in a flare. When I'm not in an active flare I live in constant fear of when the next flare will occur"
- "It limits my social life; I stay in the house more than I did before. Very tired and weak. Lost 30 lbs, not as strong. Affects overall quality of life. Fatigue limits what I can do in a day."
- "My diet has changed completely, I used to enjoy eating. Going to work is sometimes so difficult, I wish I could just go back to bed."
- "My energy levels have decreased and I get fatigued much more easily, the fear of pain, bleeding, incontinence is horrible. The worst part is fearing the next big flare that will prevent me from being a mom to my 18 month old."

It's one thing to read a list of common symptoms or data on how IBD affects patients, but it is the individual stories of these patients, as summarized above, which astound us and motivate us to support patients' need for more diversity in effective treatments. In addition, treatments should improve quality of life, not cause more symptoms, pain, frustration, or hardship.

### 2.3 Patients' Experiences With Current Therapy

The treatment of Crohn's disease is multi-faceted; it includes managing the symptoms and consequences of the disease along with therapies targeted to reduce the underlying inflammation. Typically, a patient starts on one type of treatment and, if there is inadequate response, then switches to another type.

5-ASA helps to settle acute inflammation and, for some patients, keeps the inflammation inactive when taken on a long-term basis (maintenance). To reduce inflammation in moderate to severe cases of Crohn's disease, corticosteroids can help. For topical relief in the colon, corticosteroids are available in rectal formulations. These are inconvenient therapies that make it difficult for patients to keep a normal routine. Also, if a patient has significant diarrhea, then the rectal medications may be difficult to hold in place for sufficient time to be effective. Immunosuppressive agents reduce dependence on steroids and help patients who have steroid-resistant disease, but it could take up to six months or more of therapy to see results.

Monoclonal antibodies (biologics) treat Crohn's disease when older medications fail to relieve symptoms. Entyvio®, administered by infusion, is a humanized monoclonal antibody that specifically binds to the  $\alpha 4\beta 7$  integrin and blocks the interaction of  $\alpha 4\beta 7$  integrin, which is a different pathway from that used by earlier biologics that blocks TNF- $\alpha$ . This new option could reach patients for whom existing medications have not worked.

80% of the patients who responded to this part of our survey believe there is a gap in currently available treatments. Of these patients, more than 80% felt that safer and more effective medication options are especially lacking.

Some problems they described with current treatments include the following:

- “On the prednisone I have developed the "moon" face, I face challenges with emotions. I experience depression off and on. I am really, really, really tired of using enemas & suppositories!”
- “I get many side effects when taking prednisone.”
- “With my current treatment, I often fail to get to the bathroom on time.” [Stop and imagine for one minute how much anxiety and mess this would cause!]

Patients know that biologics are expensive medications, and they believe that government decision-makers should consider the tremendous costs associated with the disease when they do not have appropriate treatment, as these costs are much more burdensome to Canadian taxpayers.

“While it is true that these drugs are exorbitantly expensive,” said one participant in a recent roundtable discussion, “in the long run they are less costly for society than the alternative, which is other numerous health care expenses, surgeries, and hospital stays, as well as lost work productivity and long-term disability funding.” Additional ripple-effect costs relate to depression and other mental health problems ulcerative colitis patients suffer when their disease is not under control for long periods.

Patients affected by Crohn’s disease need access to medications that work. Inadequate access to biologic medication results in preventable patient suffering (e.g., continual, debilitating disease symptoms; secondary illnesses such as depression and anxiety disorders; and loss of family/social interactions). It also leads to unnecessary usage of health care resources (e.g., hospital stays, surgeries, diagnostic procedures, other medications) and a ripple effect of financial burden on the government and taxpayers (e.g., through inability to work, long-term disability claims, biologic-related debt, and even bankruptcy).

When the Crohn’s disease patient receives the right medication at the right time and for the right duration – as determined between physician and patient – these individuals can live full, rewarding lives as productive, valuable citizens who participate in the workforce and community.

Physicians typically don’t recommend surgery for Crohn’s disease because the disease can affect any part of the entire GI tract and extend into the muscle wall. However, it does occur for some patients and we discuss this more fully below.

### **2.4 Impact on Caregivers**

When treatment does not provide effective relief, patients require more frequent use of hospital resources, increasing the public health care burden and disempowering individuals. In addition, caregivers may need to devote more resources to a family member suffering from Crohn’s disease flares who is unable to complete day-to-day tasks such as errands, cooking, hygiene, etc., because of unresolved disease problems.

## **Section 3 — Information about the Drug Being Reviewed**

### **3.1 Information Gathering**

Information gathered from the product monograph, attending scientific session on the product during Canadian Digestive Diseases Week, and discussions with gastroenterologists and patients who used the medication during clinical trial.

### **3.2 What Are the Expectations for the New Drug or What Experiences Have Patients Had With the New Drug?**

Patients have seen remarkable – sometimes miracle-like – results from biologics when other treatments failed. Not everyone has responded to the current available treatments, so more options are essential. Biologics come with a number of potential side effects and risk factors, and physicians only prescribe them when they believe these powerful medications are a patient’s best hope of controlling Crohn’s difficult, sometimes incapacitating symptoms.

With moderate to severe Crohn's disease, Entyvio® has the potential to improve the health and quality of life of many individuals currently suffering from ineffective treatments that put an unnecessary burden on them. When other medications don't work well or specific patients cannot tolerate them, Entyvio® could be an extremely valuable next step in getting a patient's Crohn's disease symptoms under control and inducing and sustaining remission.

Our experience is that each case of disease is unique in that the physician is treating an individual patient, potentially with co-morbidities and influences. What works for one person does not necessarily work for another. **Choice among effective treatment options is essential for patients.**

### **Surgery versus Biologics**

Physicians typically don't recommend surgery for Crohn's disease because it can affect the entire GI tract. Crohn's disease has a high recurrence rate of up to 75%, even after surgical removal of all visible and microscopic disease. However, in some cases, surgery is required, especially when medical management fails and complications arise, such as obstruction, strictures, and fistulae or abscess formation. Yet surgery is **not a cure**; removing any part of the GI tract for Crohn's disease can lead to other complications, and **the systemic disease remains**. As with ulcerative colitis, any loss of colon function results in frequent elimination that is mostly liquid. This means that even after surgery, patients could face troublesome gastrointestinal symptoms – up to 20 bowel movements a day. Moreover, if a physician recommends removal of the colon (colectomy), it may no longer be possible to eliminate waste (have a bowel movement) from the usual anatomic route. The surgeon will remove diseased tissues and then redirect the end of the remaining intestinal tract to the surface of the skin, where the surface opening is called a "stoma" or ostomy. An appliance is attached to collect waste. Finally, if a patient has a surgically-created pouch to hold stool before elimination, it can also become inflamed, a condition called pouchitis, which requires further medical attention.

Many patients will also continue to experience serious extraintestinal manifestations of IBD, such as arthritis of the spine (ankylosing spondylitis), ongoing inflammation or ulcerations of the skin, and many other serious conditions.

While being successfully treated on biologic medications, such as Entyvio®, patients are less likely to suffer from the extra-intestinal manifestations of IBD. For those with Crohn's disease who have gone unsuccessfully through other medical options, Entyvio® provides an additional treatment option for patients to achieve stable, steroid-free remission.

98% of patients in our survey said they would rather receive a biologic medication, despite the potential risks and side effects, than get a colectomy. Even if their disease became very severe, they still said they would prefer a biologic medication over colectomy. One patient explained, "I have a strong desire to keep my body intact. The colon serves a myriad of beneficial functions and is self-cleaning."

Patients welcome a new treatment for the Crohn's disease and physicians need all the tools available in their medicine bags. Please recommend Entyvio® be listed for Crohn's disease patients.