

TRENDS 2021



# Gastrointestinal

## Diseases and Conditions:

A Common and Growing Problem in  
Latin America and the Caribbean

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## **Gastrointestinal Diseases and Conditions:**

A Common and Growing Problem in  
Latin America and the Caribbean

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Gastro chronic diseases have been increasing in young people during the last decade due to changes in nutrition and lifestyle factors”

Dr. Jose Gabriel Luque,

Regional Medical Director, PALIG

# Executive Summary



Gastrointestinal disorders and illnesses are common, and increasingly prevalent, among Latin American and Caribbean working-age populations.

Chronic digestive diseases such as gastro-esophageal reflux disease (GERD), irritable bowel syndrome (IBS), and inflammatory bowel disease (IBD) account for the majority of gastrointestinal conditions among these populations. A recent global analysis of IBD trends found that Guatemala and Honduras have some of the highest increases in inflammatory bowel disease rates in the world.<sup>1</sup>

The increasing trends related to chronic gastrointestinal diseases in Latin America and the Caribbean are related to a range of factors, many associated with the same changing dietary patterns, reductions in physical activity and higher rates of stress presented in a previous PALIG white paper on chronic disease.<sup>2</sup>

Digestive diseases, both chronic and acute, are costly to individuals, employers, insurers, and the society-at-large. Studies have found that workers with GERD or IBS, for example, have 50-70% higher medical costs and twice the rates of absenteeism as their co-workers without these conditions.

There is a dearth of published studies on digestive disorders among working-age populations in Latin America and the Caribbean. We therefore conducted an original analysis of over 20,000 patients that submitted more than 40,000 digestive-related medical claims to PALIG in 2019. A key finding from this analysis is that 77% of the claims (and costs) submitted were associated with chronic rather than acute gastrointestinal disorders.

The good news is that for many gastrointestinal disorders, relatively small changes in one's dietary habits, physical activity and stress levels can make a tremendous difference in reducing the risk of gastrointestinal illnesses. We include specific information that can help turn the tide on the heavy burden of these diseases.

# 77%

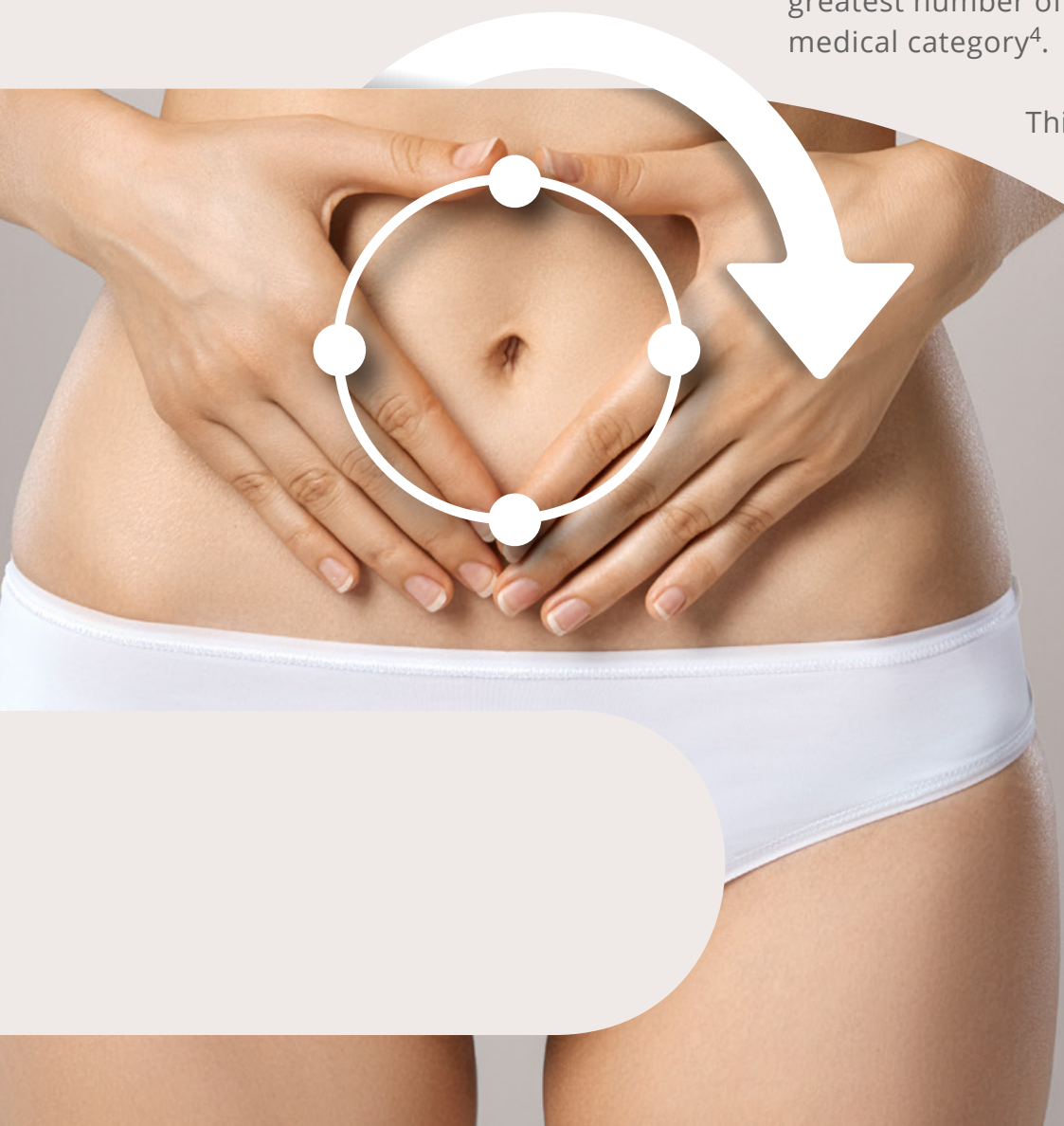
of the claims (and costs) submitted were  
associated with chronic rather than acute  
gastrointestinal disorders.



# Introduction

Gastrointestinal maladies are some of the most common disorders and diseases in the world. In the United States, for example, 1 of every 5 Americans is affected by a digestive disease<sup>3</sup>. In Latin America and the Caribbean, gastrointestinal conditions account for the greatest number of patient visits of any medical category<sup>4</sup>.

This report summarizes the latest available data on these trends and their main drivers.



Gastrointestinal disorders account for a large number of medical visits and hospitalizations, and are costly to individuals and their employers. **In the United States, digestive diseases result in 48 million ambulatory care visits and 21.7 million hospitalizations annually.** Digestive diseases account for \$136 billion in direct and indirect costs in the U.S – which is more than heart disease (\$113 billion) and mental health (\$99 billion)<sup>5</sup>.

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In addition to being disruptive to daily life and costly, digestive diseases often have a negative impact on individuals' mental health and wellbeing. For employers, gastrointestinal conditions among employees can have significant impact on higher rates of absenteeism and worker productivity<sup>6</sup>. One study found that approximately 20% of working Americans suffer from gastroesophageal reflux disease (GERD) and those that do cost twice as much as their counterparts without GERD<sup>7</sup>.



20%

of working

Americans

suffer from

Gastroesophageal

Reflux Disease

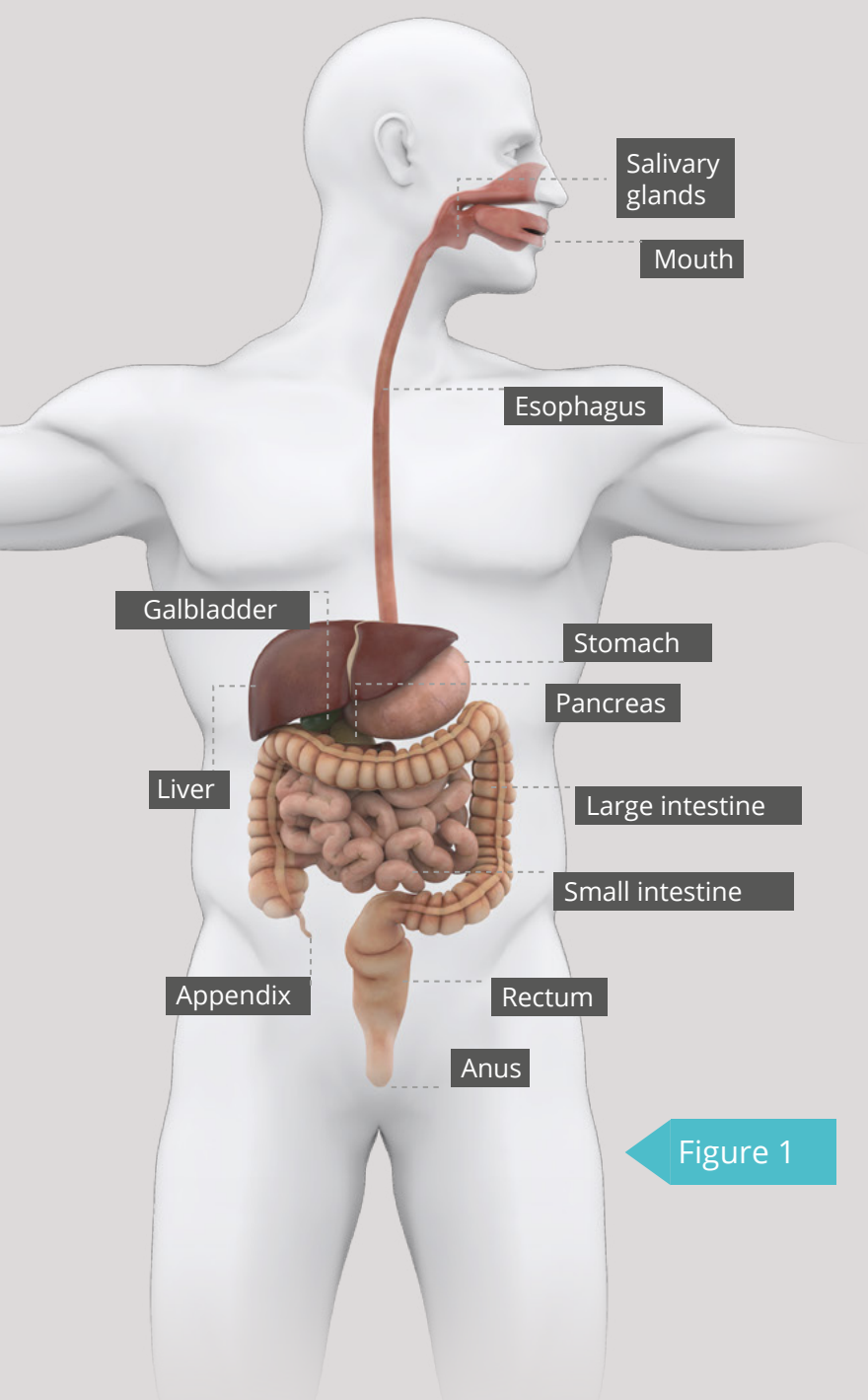
(GERD)

For the current paper, we conducted an original analysis of over 22,000 patients that submitted more than 40,000 digestive-related claims to PALIG during 2019. This analysis offers unique insights into the burden of disease among a working age population in Latin America and is therefore uniquely valuable to employers and medical staff that care for employees.

We conclude the paper with practical information for individuals and companies reducing the risk and burden associated with gastrointestinal diseases.

# The Digestive System

A brief refresher on the digestive system itself may be helpful prior to diving into the disorders and diseases associated with this system.



The digestive system is made up of the gastrointestinal tract—also called the GI tract or digestive tract—and the liver, pancreas, and gallbladder (see Figure 1). The GI tract is a series of hollow organs joined in a long, twisting tube from the mouth to the anus. The hollow organs that make up the GI tract are the mouth, esophagus, stomach, small intestine, large intestine, and anus. The liver, pancreas, and gallbladder are the solid organs of the digestive system. The large intestine includes the appendix, colon, and rectum.

**Bacteria in the GI tract, also called gut flora or microbiome, help with digestion.** Parts of the nervous and circulatory systems also help. Working together, nerves, hormones, bacteria, blood, and the organs of the digestive system digest the foods and liquids we eat or drink each day. Digestion is important for breaking down food into nutrients, which the body uses for energy, growth, and cell repair.

Figure 1



# Disorders and Conditions

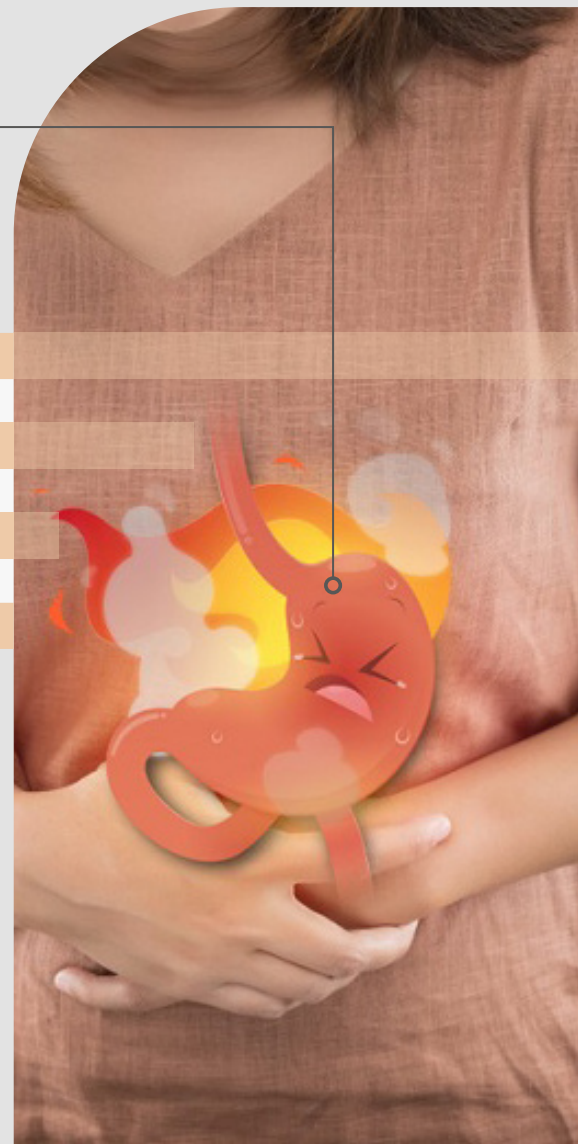
## General Symptoms of gastrointestinal conditions

Symptoms of digestive disorders vary from condition to condition and from person to person. However, some symptoms are common to most gastrointestinal problems. Common symptoms include:

- :: Abdominal discomfort (*bloating, pain or cramps*)
- :: Diarrhea, constipation (*or sometimes both*)
- :: Acid reflux (*heartburn*)
- :: Unintentional weight loss
- :: Vomiting and nausea
- :: Loss of appetite
- :: Difficulty swallowing

## Most Common Acute and Chronic Gastrointestinal Disorders

Digestive diseases and conditions can be acute, lasting only a short time, while others are chronic, or long lasting. Table 1 (*next page*) presents a listing of some of the most common Acute and Chronic Gastrointestinal Disorders.



## Acute

• Infectious Gastroenteritis

• Colitis

• Enteritis

• Peptic Ulcers

• Hepatitis (viral acute)

## Chronic

• Hepatitis

• Diverticulosis & Diverticulitis

• Irritable Bowel Syndrome (IBS)

• Inflammatory Bowel Disease (IBD, including Crohn's Disease and Ulcerative Colitis)

• Celiac Disease

• Gastroesophageal Reflux Disease (GERD)

• Chronic Diarrhea

• Constipation

• Hepatitis (chronic)

**TABLE 1:**  
Common Acute and Chronic Gastrointestinal Disorders.

Many gastrointestinal diseases share some of the same symptoms, so it is often difficult for a layperson to know what type of condition they have, or when they should go to the doctor for a medical diagnosis and treatment.

A number of the chronic digestive disorders have similar sounding names, which can also confuse people. In the next section, we provide an overview of acute infectious and chronic gastrointestinal disorders, followed by some statistics on how the burden of these conditions is changing in Latin America and the Caribbean.

"Unfortunately, there are many different gastrointestinal issues, so it is easy to mistakenly neglect them. Some GI problems are mild and usually go away on their own, but some conditions are serious enough that you have to see a physician or gastroenterologist."



Dr S. Guandalini, MD  
Founder of the University of Chicago Celiac Disease Center

## Common Gastrointestinal Disorders

In this section of the report, we review some of the most common digestive conditions and their symptoms. Note that this information is for educational purposes – only your medical professional can accurately diagnose your disease.



If you see blood in your stool or vomit, contact your physician immediately. It can be a sign of serious illness.

## Acute Infectious Gastroenteritis

Acute conditions are most often the result of an infection of the gut and inflammation of the gastrointestinal tract (the intestines and the stomach). Acute gastroenteritis is most commonly caused by eating foods or drinking beverages that contain a pathogenic bacterium, virus, or other microorganism. Gastroenteritis bugs common in Latin America and the Caribbean are listed in Figure 2.

### PATHOGEN

Escherichia coli (E-Coli)

Yersinia

Staphylococcus

Shigella

Salmonella

Campylobacter

### Common Food / Water Source

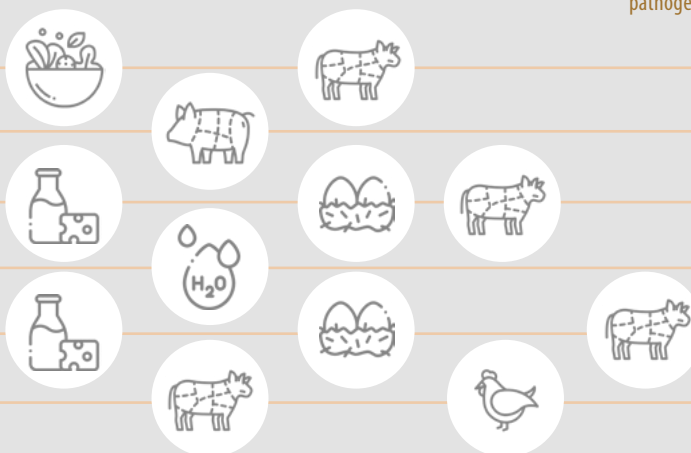


Figure 2. Common bacterial pathogens that cause gastroenteritis

Acute, infectious gastrointestinal illness is a result of contaminated water, poor sanitation and personal hygiene, e.g. hand-washing, and improper cooking of foods.

In contrast to acute, infectious gastrointestinal illness, which usually resolve quickly (i.e. within days), chronic gastrointestinal conditions and diseases tend to last longer, sometimes even a lifetime. Some of the chronic digestive conditions we will examine later in this paper may be unfamiliar to some readers. Table 2 includes a brief description of the most common chronic gastrointestinal disorders.

Table 2. Brief Description of Common Chronic Gastrointestinal Disorders.

### DIGESTIVE CONDITION

### DESCRIPTION

#### Celiac disease

Autoimmune digestive disorder in which the body launches an immune reaction to gluten.

#### Chronic diarrhea

When a person passes watery or loose stools for four or more weeks. This persistent diarrhea can be due to a number of various causes and may cause dehydration and poor nutrition.

#### Constipation

Very common digestive problem. Difficulty moving bowels because of a dry, hard stool.

#### Crohn's disease

An inflammatory bowel disease (IBD) that involves inflammation of any part of the gastrointestinal tract, most commonly the lower small intestine and the large intestine, and has a chronic course.

## DIGESTIVE CONDITION

## DESCRIPTION

Table 2. Brief Description of Common Chronic Gastrointestinal Disorders.

## Diverticulitis

This condition occurs when **diverticula** (small pouches or pockets that sprout on the GI lining due to diverticulosis) **get inflamed and infected**. While common symptoms like constipation, diarrhea and bloating are mild, advanced diverticulitis can lead to rectal bleeding and other severe digestive complications.

## Inflammatory Bowel Disease (IBD)

Chronic inflammatory diseases involving the GI tract, including **Crohn's disease** and **ulcerative colitis**.

## Irritable Bowel Syndrome (IBS)

A condition with abdominal pain or bloating associated with either diarrhea or constipation (or both). *(See comparison with Inflammatory Bowel Disease (IBS)).*

## Lactose intolerance

Occurs when someone lack lactase, an intestinal **enzyme which normally digests lactose**, the type of sugar found in milk and processed dairy products.

## Gallstones

Small stone-like solids that form in the bile-storing gallbladder **when there is a high concentration of bilirubin and cholesterol**. While they can cause no symptoms at all, gallstones may also cause pain in the upper abdomen, burping, dark urine, nausea, clay-like stools.

## Gastroesophageal Reflux Disease (GERD)

This is characterized by persistent bouts of acid reflux from the stomach up into the esophagus, **which can slowly damage the esophagus**. A person with GERD experiences heartburn and acid reflux symptoms at least twice per week.

## Liver disease

Refers to all **diseases, complications, and illnesses that can affect the liver**, including liver cirrhosis. Common symptoms include pale stools, dark urine, jaundice (or yellowing of eyes and skin), appetite loss, nausea, and vomiting.

## Pancreatitis

**Inflammation of the pancreas**, an organ that produces digestive juices as well as hormones. Symptoms are severe abdominal pain, nausea, vomiting, weight loss. While acute pancreatitis may be caused by a variety of factors, including infections, more than two-thirds of chronic pancreatitis cases are alcohol-related.

## Peptic ulcer disease (PUD)

Peptic ulcers form when **sores develop on the lining of the stomach** and upper portion of small intestine. Changes in appetite, vomiting, chest pain, indigestion, weight loss, and bloody stools are some of the symptoms of PUD.

## Ulcerative colitis (UC)

This is another inflammatory bowel disease. **In UC, the lining of the colon is affected by inflammation and open sores**. Chronic cases are characterized by abdominal pain, diarrhea, bloody stools, malnutrition and fever. Patients with ulcerative colitis and Crohn's disease involving the colon need to be especially vigilant about screenings for colorectal cancer

## Gastrointestinal Cancers

Cancers of the digestive system, including Colon and rectum, liver, pancreas, and stomach **are serious conditions that need immediate medical attention**. A discussion of ways to prevent cancer is presented in an earlier PALIG white paper.



# Inflammatory Bowel Disease VS Irritable Bowel Syndrome

Two of the digestive conditions that are frequently confused are Irritable Bowel Syndrome (IBS) and Inflammatory Bowel Disease (IBD). Although these can have similar symptoms, these are not the same condition and require very different treatments. Table 3 contrasts the similarities and differences between IBS and IBD.

## IBD

Inflammatory Bowel Disease

- ⌘ Chronic inflammatory diseases involving the GI tract, including Crohn's disease and ulcerative colitis.
- ⌘ Immune cells cause inflammation and ulceration in the lining of the intestines, which can lead to frequent and/or urgent bowel movements, abdominal pain, diarrhea, or bleeding.
- ⌘ In IBD, the GI tract is damaged. Symptoms can be different for everyone and depend on the type of IBD and where the inflammation is located in the GI tract.
- ⌘ Relatively rare.
- ⌘ More serious disease that more often leads to hospitalization and death than IBS.

## IBS

Inflammatory Bowel syndrome

- ⌘ Functional GI disorder that causes recurrent abdominal pain and changes in bowel movements.
- ⌘ Symptoms may include bloating, constipation, diarrhea, or mixed diarrhea with constipation.
- ⌘ Patients with IBS have these symptoms without damage to the GI tract.
- ⌘ Endoscopy and radiology tests do not show inflammation.
- ⌘ One of the most commonly diagnosed gastrointestinal conditions. Affects as many as 1 in 10 people globally.
- ⌘ Generally less severe outcomes (hospitalization and death) than IBD.

Table 3. Comparing Inflammatory Bowel Disease (IBD) and Irritable Bowel Syndrome (IBS)

# IBS



**is one of a number of functional gastrointestinal disorders (FGIDs). FGIDs are sometimes referred to as “disorders of gut-brain interaction”, have major economic effects on health care systems and can have significant negative effects on quality of life<sup>9</sup>.**



# Statistics and Trends

## THE BURDEN OF DIGESTIVE DISEASES








The various types of digestive diseases vary widely in their prevalence, whether they result in a visit to the doctor or the hospital, how fatal they are and how much medication is prescribed to treat them.

In the United States, the two most common digestive diseases are acute gastrointestinal infections and chronic constipation, with 135 million and 63 million sufferers respectively. (Table 4). Gallstones, peptic ulcers, and irritable bowel syndrome are the next most common, with about 15-20 million people each. Notably, some other conditions, i.e. liver disease, diverticular disease, and pancreatitis are relatively rare, but have higher mortality rates compared to the other conditions.

### DIGESTIVE DISEASE STATISTICS FOR THE U.S.



Table 4. Digestive Disease Statistics for the U.S.

					
	Prevalence	Ambulatory visits	Hospitalizations	Mortality	Prescriptions
	MILLION PEOPLE	MILLIONS	THOUSANDS	NUM DEATHS	MILLIONS
DISEASE					
Chronic Constipation	63.0	4.0	1,100	132	5.3
Crohn's Disease	0.4	1.1	187	611	1.8
Diverticular Disease	2.2	2.7	814	2,889	2.8
Gallstones	20.0	2.2	675	994	1.7
Gastrointestinals Infections	135.0	2.3	487	11,022	0.9
Hepatitis B or C	5.3	1.9	480	7,432	
Irritable Bowel Syndrome	15.3	1.6	208	21	5.9
Liver Disease	3.0	0.6	1,200	42,923	0.7
Pancreatitis	1.1	0.9	553	3,413	0.8
Peptic Ulcer Disease	15.5	0.7	358	2,981	5.0
Ulcerative Colitis	0.6	0.7	107	305	2.1

Source: <https://www.niddk.nih.gov/>. Accessed August 10, 2021.

Finally, these conditions drove a large number of prescriptions. Irritable bowel syndrome, peptic ulcer disease, and chronic constipation accounted for over half of the 27 million prescriptions filled for these conditions in the U.S.

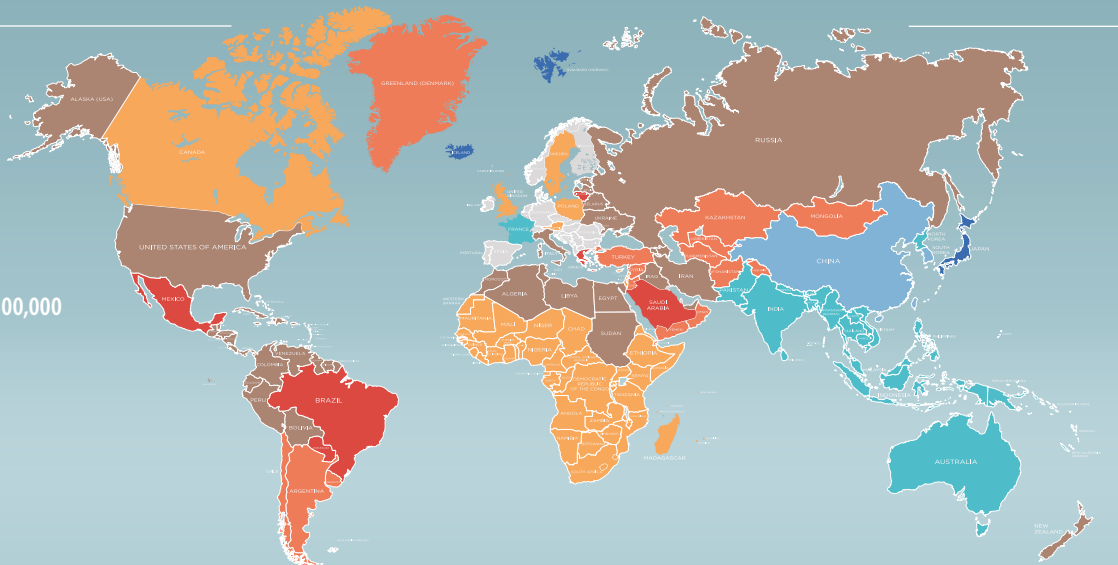
# Chronic Gastrointestinal Disease in Latin America and the Caribbean

The rapid rise in the rates of chronic gastrointestinal diseases in Latin America and the Caribbean over the past two decades is striking.<sup>10,11,12</sup>

A recent (2020) global review of gastro-esophageal reflux disease (GERD), for example, found that rates of GERD in Latin American and Caribbean countries are some of the highest in the world.

**Figure 3.** Prevalence of gastro-esophageal reflux disease (GERD) globally.

Age-Standardised YLD rate pe 100,000

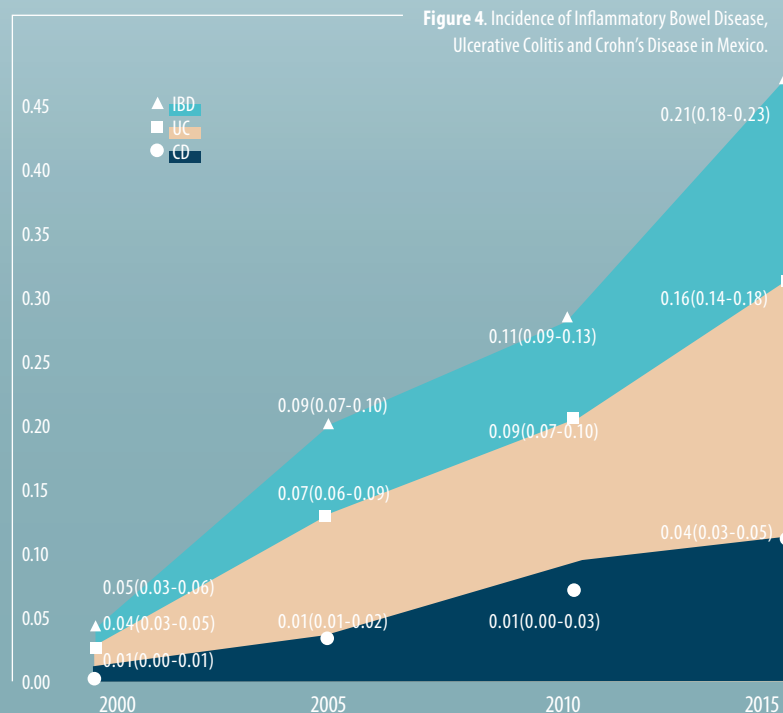


Source: GBD 2017 Gastro-oesophageal Reflux Disease Collaborators. The global, regional, and national burden of gastro-oesophageal reflux disease in 195 countries and territories, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. *Lancet Gastroenterol Hepatol.* 2020 Jun;5(6):561-581.

A similar global analysis of inflammatory bowel disease (IBD) found that while rates of IBD in Latin America and Caribbean countries are currently below that of the United States, the percentage change in IBD prevalence rate is high, reflecting increasing rates in these countries. For example, between 1990 and 2017, the prevalence of IBD increased by 120% and 90% in Guatemala and Honduras, respectively<sup>13</sup>.

Rates of other chronic digestive disorders are also increasing throughout the region. Figure 4 shows the increase in IBD, UC, and CD in Mexico between 2000 and 2015<sup>14</sup>. Similar increasing trends in IBD were found in Colombia.

**Figure 4.** Incidence of Inflammatory Bowel Disease, Ulcerative Colitis and Crohn's Disease in Mexico.



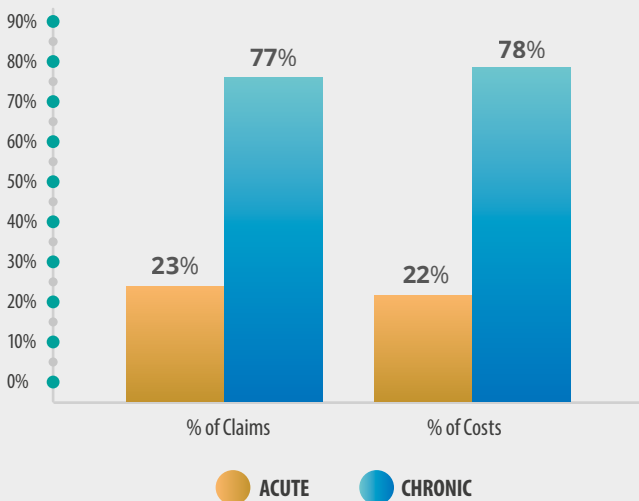


# PALIG analysis

We conducted further analysis of the 22,566 patients that submitted these digestive condition claims in 2019 to identify the most prevalent gastrointestinal diseases. The results are presented in Table 5.

There is a dearth of detailed studies on digestive disorders among Latin American and Caribbean-based working age populations. We therefore conducted an original, in-depth analysis of over 40,028 digestive disease-related Latin American claims submitted and processed by PALIG during 2019 . In our analysis, we found 77% of the claims were related to chronic gastrointestinal conditions while 23% were associated with acute conditions (Figure 5).

**Figure 5.** PALIG analysis of 40,028 Gastrointestinal-related claims in 2019.



**Table 5.** Most Common Gastrointestinal Conditions among 22,566 Central American patients submitting claims to PALIG in 2019.

Medical Diagnosis	Common Description	Chronic	Acute	Number of Patients	% of all Patients
Colitis/Gastroenteritis (non-infective) (includes IBS and IBD)	Non-Infective Inflammation of the colon, stomach or intestine	●		11,743	52.0%
Colitis, Enteritis, or Gastroenteritis (Infective)	Inflammation of the colon, stomach or intestine due to an infection		●	4,399	19.5%
Gastritis and Duodenitis	Inflammation of stomach lining	●		4,373	19.4%
Hepatitis and other Liver Abnormalities	Inflammation of the liver	●		740	3.3%
Peptic Ulcer	Lesion in the lining of the digestive tract	●		633	2.8%
Diverticulitis	Small, bulging pouches in the lining of intestine	●		523	2.3%
Ulcerative colitis	Ulcers of the colon	●		155	0.7%

Non-Infectious colitis and gastroenteritis comprised the most common category, suffered by 52% of the patients. This diagnostic category includes Inflammatory Bowel Disease (IBD) and Irritable Bowel Syndrome (IBS). Colitis, enteritis and gastroenteritis due to an infection, and Gastritis/ Duodenitis were the second and third most common set of conditions, respectively.



**GERD**  
increased  
**\$3,355**  
cost per  
employee  
in the U.S

Digestive disorders are expensive – for individuals, their employers, insurers, and the society at large. In a large U.S. study of 267,269 employees, for example, researchers found that 5% of workers suffered from gastroesophageal reflux disease (GERD). GERD in this employed population was associated with a mean incremental cost of \$3,355 per employee in which direct costs accounted for 65%, prescription drug costs 17%, and indirect costs (e.g. absenteeism) 19%<sup>16</sup>.

Excess direct and indirect costs have been found for other digestive disorders as well. An analysis of the impact of the costs of irritable bowel syndrome (IBS) in the workplace found that employees with IBS cost 38% more than employees without IBS<sup>17</sup>. Medically related work absenteeism cost the employer \$901 on average per employee treated for IBS compared with \$528 dollars on average per employee without IBS, or about 70% more. A global review<sup>18</sup> of IBS found that patients with IBS are twice as likely to take time off work as colleagues without IBS<sup>19</sup>.

“

Chronic bowel diseases have a great impact on today's work capacity as they decrease productivity time"

Dr. Jose Gabriel Luque,

Regional Medical Director, PALIG

**COST to  
Employers**





The risk factors and actions to take to reduce that risk differ between acute and chronic digestive conditions. We therefore look at the risk factors for each type separately.

# Lowering Risk



## Acute, Infectious Gastrointestinal Illnesses

The majority of acute gastrointestinal illnesses are a result of ingestion of a pathogen (bacterium, virus, or other microbe) in water or food. Risk for contracting an acute gastrointestinal illness is affected by three primary factors: (1) **society-level** conditions related to water, sanitation and cleanliness of the environment (2) **individual-level** behaviors related to cooking methods and personal hygiene, including hand washing, and (3) **Source of the food**, e.g. street food vs. cooked at home.

Latin America and the Caribbean have made tremendous progress in the areas of clean water and sanitation, but a number of countries still have a ways to go. In a recent (2020) publication by the Pan-American Health Organization, for example, PAHO found that in a number of countries in Latin America and the Caribbean 15-35% of the population do not have access to even basic water and sanitation services)<sup>20</sup>.





## Individual-Level Practices

In areas with less than safe water and sanitation services, taking extra precautions when eating and drinking can greatly reduce the risk of getting an acute gastrointestinal illness. Table 6 summarizes safe vs. risky food and drinks in marginally sanitary environments.

**Table 6:** Safe vs Risky Food and Drinks in areas with inadequate water and sanitation infrastructure.



	Usually Safe	Often Risky
FOODS	Foods served hot Dry or packaged Goods	Raw foods: especially raw salads, fresh salsas, raw or undercooked meats “Street Food”, or buffets, especially if not cooked hot just prior to serving
DRINKS	Bottled or canned drinks Hot drinks Milk (pasteurized)	Tap water Ice Freshed squeezed juice Fountain drinks

Source: CDC, <https://wwwnc.cdc.gov/travel/page/food-water-safety>. Accessed August 15, 2021.

To minimize the risk of gastroenteritis, proper cooking of meats, e.g. cooking chicken to an internal temperature of 160°F (74°C) is required.

## Chronic Gastrointestinal Disorders

The rising trends in chronic digestive disorders closely mirror economic development and “westernization”<sup>21</sup>. Economic development and westernization have led to changes in dietary habits, reduced physical activity, obesity, increased alcoholism, and higher rates of stress, among other risk behaviors. The following are some of the most important ways one can reduce the risk of chronic digestive disorders.

We also note that some chronic digestive disorders

are driven primarily by genetics. Celiac disease and lactose intolerance, for example, are a result of genetic make-up rather than an individual behaviors.

## Reducing Risk for Chronic, Digestive Disorders

Many of the risk factors for chronic, digestive disorders are the same as those for other chronic diseases like diabetes and hypertension. In this section, we look at the key risk factors driving the rise in chronic gastrointestinal conditions in Latin America and the Caribbean.

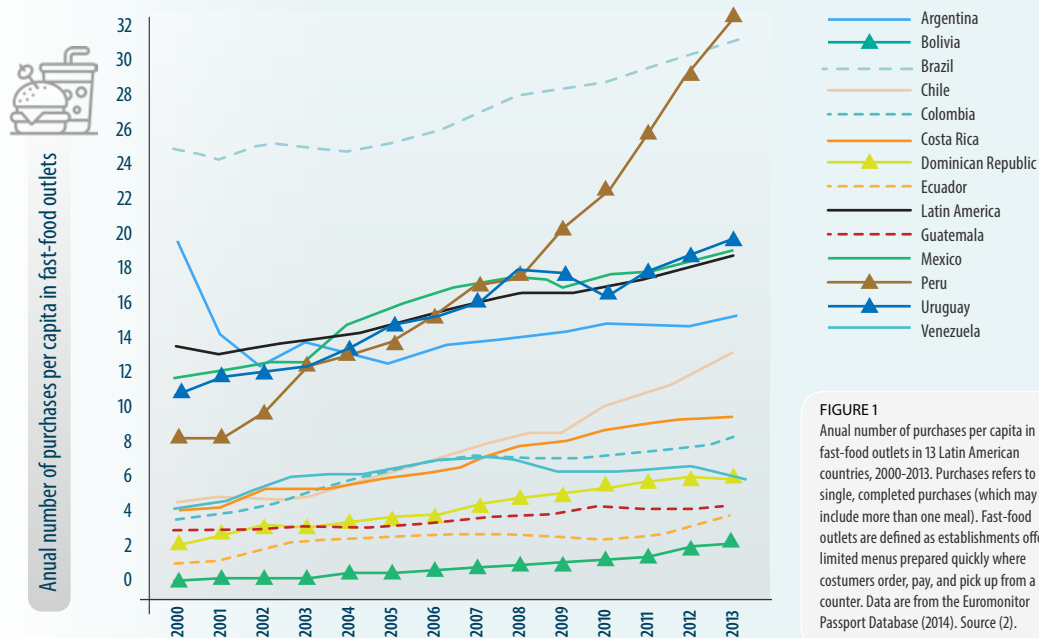
### DIETARY FACTORS

#### A Low Fiber Diet

Fiber is a type of carbohydrate that the body can’t digest, and is crucial to digestive health. While most carbohydrates are broken down into sugar molecules, fiber cannot be broken down, and instead passes through the body undigested. Fiber helps keep you feeling full and keeps blood sugar in check. It also helps prevent or relieve constipation, and promotes a healthy gut microbiome, which is needed to produce vitamins, combat unhealthy bacteria and promote overall health.

Traditional Latin American and Caribbean diets often included large amounts of beans and vegetables that are rich in dietary fiber. With westernization, diets have become lower in fiber and higher in highly processed foods. Consumption of fast-food, which is typically rich in fats and sugar and low in dietary fiber, has also increased dramatically over the past two decades. Figure 6 shows the rapid increase in the purchases of fast food in Latin America<sup>22</sup>.

Figure 6: shows the rapid increase in the purchases of fast food in Latin America .



Source: Matos RA, Adams M, Sabaté J. Review: The Consumption of Ultra-Processed Foods and Non-communicable Diseases in Latin America. Front Nutr. 2021 Mar 24;8:622714. doi: 10.3389/fnut.2021.622714. PMID: 33842521; PMCID: PMC8024529

## DIETARY HABITS FOR DIGESTIVE HEALTH

### Consume a Fiber-rich Diet

Beans, popcorn, nuts, bran, berries, oatmeal, vegetables – the crunchier, the better! Many whole grains native to Latin America, e.g. amaranth, quinoa, whole corn and cornmeal, wild rice, and wheat berries are excellent sources of fiber.

Of note, certain chronic gastrointestinal conditions, IBS and diverticulitis, improve with less of certain types of foods and carbohydrates from your diet. Consult with a dietitian if you have digestive issues before radically changing your dietary habits and patterns.

**Fiber**  
promotes a healthy  
gut microbiome.





## Eating Habits

Eating late at night is associated with GERD and other digestive maladies. Go light on alcohol (as below), caffeine, spicy and acidic foods, and avoid foods that trigger your symptoms.

**Try to avoid eating too close to when you go to sleep. Going to bed at least 2 hours after you've last eaten is optimal.** Avoid acid-stimulating foods, e.g. caffeine, alcohol, fried and fatty foods, tomato sauce).

About 50% of Hispanic/Latinx adults **are lactose intolerant**. Populations of African descent may be as high as 75% intolerant. There is a growing availability of lactose-free products on the market.



## Consider Going Lactose-Free




## Water

Water is important for digestive health. It helps to soften the stool, reducing the risk of constipation. As importantly, **water helps to break down food, assisting the GI tract absorb nutrients faster and more effectively.** The Institute of Medicine recommends 3 liters (13 cups) of water per day for men and 2.2 liters (9 cups) for women to prevent dehydration.

You can get your water needs by drinking water, but also from other beverages and food that contain water. Unsweetened coffee and teas are fine, but minimize how much you drink regular (full sugar) soda, sports drinks and other sweet drinks. They usually contain a lot of sugar, which may provide more calories than you need.

Many fruits readily available in Latin America and the Caribbean are rich in water and can help you meet your hydration needs. Pineapple, for example, is 87% water and is naturally high in fiber!



**Pineapple,**  
is 87% water and  
is naturally high  
in fiber!







## Stay Active!

Not getting enough physical exercise is bad for your overall health and your digestive system. Inactivity is particularly associated with constipation.

**Aim for 20 to 30 minutes of aerobic activity every day.** These do not have to be complex sports. In fact, walking briskly, bike riding and soccer, or anything that raises your heart rate, is helpful for digestive health.

To complement your aerobic physical activity, also try and incorporate activities such as yoga and sit-ups to lower stress and keep your digestion moving.

Stress and anxiety don't just affect mental health. **They also can have negative effects on your digestive health.** A close link between the GI tract and the brain is increasingly documented in medical studies<sup>23</sup>. Being stressed causes a wide range of digestive issues, including inflammation, cramping, appetite changes and alterations to the gut microbiota.

## Manage Stress

## Aim for a Healthy Weight!

Overweight and obesity are strongly associated with a number of digestive disorders<sup>24</sup>.

**Overweight and obesity can contribute to gastrointestinal disorders.** On the other hand, some people who already have a digestive issue can have trouble losing, or even gaining weight. Consult your doctor or a nutritionist if you are having trouble attaining a healthy weight.

## Being stressed

causes a wide range of  
digestive issues

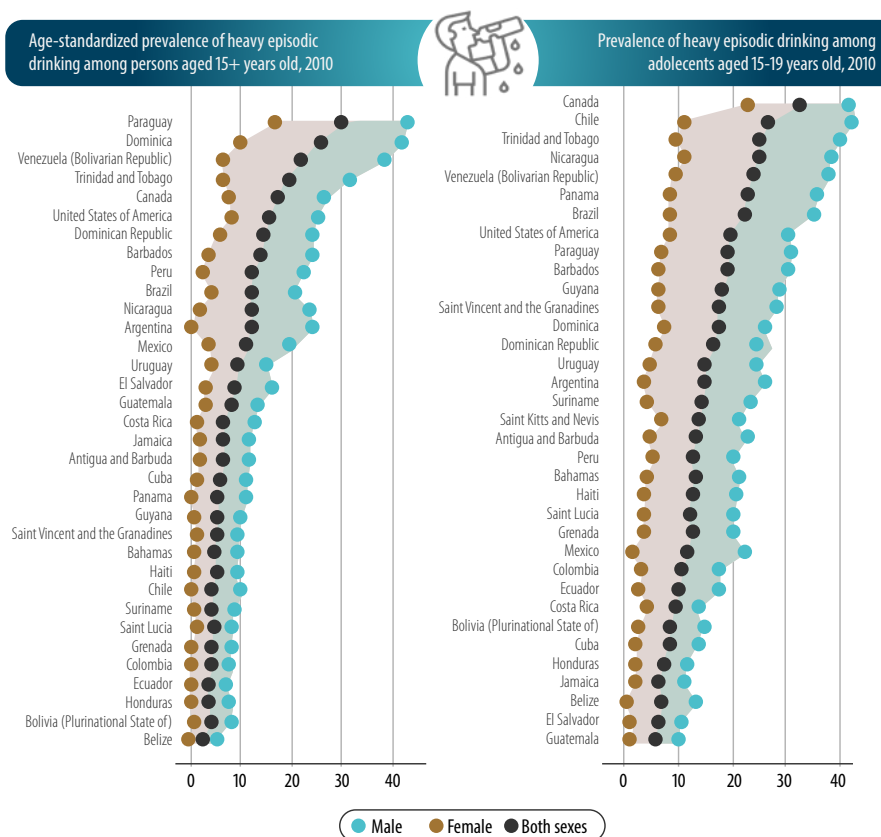


## Alcohol

Heavy drinking of alcohol is associated with stomach ulcers, pancreatitis, GERD, and liver disease, among other digestive disorders. Figure 7 shows the wide range of heavy drinking among those aged 15 and older across Latin America and the Caribbean. Alcohol is also typically high in calories, which contributes to overweight and obesity.

**Limit alcohol consumption to 2 drinks per day for men and 1 drink per day for women.**

Figure 7: Heavy episodic drinking among those 15+ years old, Region of the Americas.



Source: Source: Population (15+ years old) – WHO. Global status report on noncommunicable diseases, 2014; Population (15–19 years old) – Global information system on alcohol and health

## Stop Smoking

Smoking is a **risk factor for pancreatitis**, among other chronic conditions. Not smoking also allows you to be more physically active, which further improves digestive health.

## Genetic Factors

Many immune and autoimmune gastrointestinal disorders have a genetic component. The good news is that with some conditions, hereditary factors are only part of the story. Genes may predispose individuals to a condition, but lifestyle can help to keep the condition from becoming severe. **Be aware of what genetic digestive conditions may be in the family.**





# What Employers Can Do

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Optimal management of digestive diseases requires proper management of the condition, including early diagnosis of symptoms and adherence to medications.

**Employers can play an important role in encouraging open discussion and education related to digestive diseases.**

Employers may also play a role accommodating employees with chronic digestive diseases in order to reduce workplace disability and maintain high productivity<sup>25</sup>. These accommodations for employees with conditions such as Crohn's disease may include access to a toilet or toilet breaks and time to go to medical appointments<sup>26</sup>.



# Summary and Conclusion

Gastrointestinal disorders are common and costly. Increased stress is both an associated cause, as well as a result of chronic digestive issues. Through this white paper, we hope to open a broader discussion of these conditions, which some people may be hesitant to talk about. Better education, proper diagnosis and optimal management of digestive disorders can go a long way in supporting patients and the employers they work for.

PALIG is here to help!

# Glossary of Key Terms

- ⋮ **Colitis:** Colitis refers to inflammation of the inner lining of the colon.
- ⋮ **Diverticulitis:** a condition in which diverticula, which are small, bulging pouches, are present in the intestine, with inflammation; the acute phase of diverticulosis.
- ⋮ **Diverticulosis:** a condition in which diverticula, which are small, bulging pouches, are present in lining the intestine without signs of inflammation.
- ⋮ **Duodenitis:** Inflammation of the duodenum
- ⋮ **Enteritis:** Inflammation of the small intestine
- ⋮ **Gastritis:** Inflammation of the lining of the stomach
- ⋮ **Gastroenteritis:** Inflammation of the stomach or intestine.
- ⋮ **Peptic Ulcer:** a lesion in the lining (mucosa) of the digestive tract, typically in the stomach or duodenum.
- ⋮ **Ulcerative Colitis:** is an inflammatory bowel disease (IBD) that causes inflammation and ulcers (sores) in your digestive tract.

## ENDNOTES

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