Medical Country of Origin Information

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Bangladesh
Gastroenterology

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The report has been reviewed by International SOS and EUAA.

Contents

Disclaimer

This report was written according to the EUAA COI Report Methodology (2023). The report is based on carefully selected sources of information. All sources used are referenced.

The information contained in this report has been researched, evaluated and analysed with utmost care. However, this document does not claim to be exhaustive. If a particular event, person or organisation is not mentioned in the report, this does not mean that the event has not taken place or that the person or organisation does not exist.

Furthermore, this report is not conclusive as to the determination or merit of any particular application for international protection. Terminology used should not be regarded as indicative of a particular legal position.

'Refugee', 'risk' and similar terminology are used as generic terminology and not in the legal sense as applied in the EU Asylum Acquis, the 1951 Refugee Convention and the 1967 Protocol relating to the Status of Refugees.

Neither the EUAA, nor any person acting on its behalf, may be held responsible for the use which may be made of the information contained in this report.

The drafting of this report was finalised on 25 February 2024. Any event taking place after this date is not included in this report.

Glossary and abbreviations

Term	Definition
BDT	Bangladeshi Taka
BSMMU	Bangabandhu Sheikh Mujib Medical University
CEA	Carcinoembryonic Antigen
CT	Computed Tomography
CVD	Cardiovascular Diseases
DM	Diabetes Mellitus
ERCP	Endoscopic Retrograde Cholangiopancreatography
GERD	Gastroesophageal Reflux Disease
HDL	High-Density Lipoprotein
ICU	Intensive Care Unit
IBS	Irritable Bowel Syndrome
IPD	Inpatient Department
KCl	Potassium Chloride
LDL	Low-Density Lipoprotein
MOHFW	Ministry of Health and Family Welfare

Term	Definition
MRI	Magnetic Resonance Imaging
NaCl	Sodium Chloride
$NaHCO_3$	Sodium Bicarbonate
OPD	Outpatient Department
PET	Positron-Emission Tomography
Upazila	An administrative unit, which is a subdivision of a district formerly known as “thana”. Bangladesh has 495 *Upazilas*.

Introduction

Methodology

The purpose of the report is to provide information on access to gastroenterology treatment in Bangladesh. This information is relevant to the application of international protection status determination (refugee status and subsidiary protection) and migration legislation in EU+ countries.

Terms of reference

The terms of reference for this Medical Country of Origin Information Report can be found in Annex 2: Terms of Reference (ToR). The initial drafting period finished on 09 November 2023, peer review occurred between 09-30 November 2023, and additional information was added to the report as a result of the quality review process during the review implementation up until 25 February 2024. The report was internally reviewed subsequently.

Collecting information

EUAA contracted International SOS (Intl.SOS) to manage the report delivery including data collection. Intl.SOS recruited and managed a local consultant to write the report and a public health expert to edit the report. These were selected from Intl.SOS' existing pool of consultants. The consultant was selected based on their experience in leading comparable projects and their experience of working on public health issues in Bangladesh.

This report is based on publicly available information in electronic and paper-based sources gathered through desk-based research. This report also contains information from oral sources with ground-level knowledge of the healthcare situation in Bangladesh who were interviewed specifically for this report. For security reasons, all oral sources are anonymised.

Quality control

This report was written by Intl.SOS in line with the European Union Agency for Asylum (EUAA) COI Report Methodology (2023),[1] the EUAA Country of Origin Information (COI) Reports Writing and Referencing Guide (2023)[2] and the EUAA Writing Guide (2022).[3] Quality control of the report was carried out both on content and form. Form and content were reviewed by Intl.SOS and EUAA.

The accuracy of information included in the report was reviewed, to the extent possible, based on the quality of the sources and citations provided by the consultants. All the

[1] EUAA, Country of Origin Information (COI) Report Methodology, February 2023, url
[2] EUAA, Country of Origin Information (COI) Reports Writing and Referencing Guide, February 2023, url
[3] EUAA, The EUAA Writing Guide, April 2022, url

comments from reviewers were reviewed and were implemented to the extent possible, under time constraints.

Sources

In accordance with EUAA COI methodology, a range of different published sources have been consulted on relevant topics for this report. These include: governmental publications, academic publications, reports by international organisations, as well as Bangladeshi pharmaceutical websites.

In addition to using publicly available sources, two oral sources were contacted for this report. The oral sources are both professors and they are anonymised in this report for security reasons. The sources were assessed for their background and ground-level knowledge. All oral sources are described in the Annex 1: Bibliography. Key informant interviews were carried out in September 2023.

1. Gastrointestinal diseases

Common diseases of the gastrointestinal system encountered in Bangladesh are peptic ulcers (including gastric and duodenal ulcer), pancreatitis, irritable bowel syndrome (IBS), inflammatory bowel disease, infective diarrhoeal diseases, colorectal cancer and intestinal tuberculosis.[4] Based on disease severity and seriousness of the condition, patients seen in the *Upazila* health complex are then advised to visit district hospitals or above for further investigation and treatment. Usually, uncomplicated cases of gastrointestinal systems are managed at the *Upazila* level and below in public health facilities.[5]

There is a specialised national institute called the Sheikh Russel National Gastrointestinal Institute & Hospital[6] in Dhaka for treating gastrointestinal diseases. This 250-bed hospital has paediatric, medical and surgical gastroenterology, anaesthesia and intensive care unit (ICU), laboratory medicine, radiology and imaging, and nursing departments.[7]

Links of other private hospitals that provide services for gastroenterology are provided in Table 1 below.

Table 1. Private hospitals that provide services for gastroenterology

Facility	Web address
1. Gastro Liver Hospital & Research Institute Ltd.	https://sebaghar.com/hospital/24/Gastro-Liver-Hospital-Research-Institute-Ltd
2. Dhaka Gastro-Liver Center	https://dhakagastrolivercenter.com
3. Crescent Gastroliver & General Hospital	https://crescentgastroliver.com/ws/details.php?cid=2&id=17426
4. Evercare Hospital Dhaka	https://www.evercarebd.com/dhaka/specialities/gastroenterology-hepatology/
5. Asgar Ali Hospital	https://www.asgaralihospital.com

[4] Source A, telephone interview, 14 September 2023, Dhaka. Source A is a Professor of Medicine at Mymensingh Medical College. The person wishes to remain anonymous.
[5] Source A, telephone interview, 14 September 2023, Dhaka. Source A is a Professor of Medicine at Mymensingh Medical College. The person wishes to remain anonymous.
[6] Sheikh Russel National Gastrointestinal Institute & Hospital, 2023, url
[7] Sheikh Russel National Gastrointestinal Institute & Hospital, Department, 2023, url

Facility	Web address
6. United Hospital	https://www.uhlbd.com/bn/consultant/departments/gastro-liver-centre

1.1. Peptic ulcer, incidence and prevalence

Peptic ulcers are sores in the lining of stomach or duodenum.[8] An interview with a medical specialist revealed gastric and duodenal ulcers to be common conditions encountered in daily medical practice in Bangladesh, although population-based data on gastric or duodenal ulcer prevalence and incidence is not available for Bangladesh due to a lack of recent large clinical studies.[9] However, a retrospective multicentre study on gastric and duodenal ulcer conducted between January 2012 and July 2013 reported duodenal ulcer incidence to be 7.4 % and gastric ulcer incidence to be 3.28 %.[10]

Another study conducted in an urban medical college in Dhaka amongst patients with peptic ulcer disease showed a higher prevalence of gastric ulcers (54.5 %) as compared to duodenal ulcers (29 %). About 56 % of the studied respondents were female and belonged to age group 41 to 50 years. Almost 55.69 % of respondents had pain that was exacerbated after ingestion of food, and 52.09 % had loss of appetite.[11]

1.2. Upper gastrointestinal symptoms, incidence and prevalence

A 2014 study on upper gastrointestinal symptoms conducted in the general population reported the existence of multiple concurrent disease symptoms. Symptom prevalence varied in number, frequency and duration of symptoms. More than 3 in 4 people (75.8 %) had at least 1 upper gastrointestinal symptom, whereas 7 out of 10 respondents (69.1 %) had 2 or more symptoms and over half of the respondents (56.8 %) had 3 or more upper gastrointestinal symptoms in the 3 months preceding the interviews. Study results revealed that 32.1 % of respondents had upper abdominal pain, 42.16 % had bloating, 45.13 % had heartburn, 38.87 % had chest pain, 44.9 % had early satiation and 8.6 % had vomiting. According to this study, 40.56 % of dyspeptic patients had overlapping gastroesophageal reflux disease (GERD) symptoms.[12]

[8] NIDDK, Definition & Facts for Peptic Ulcers (Stomach or Duodenal Ulcers), 2022, url
[9] Source A, telephone interview, 14 September 2023, Dhaka. Source A is a Professor of Medicine at Mymensingh Medical College. The person wishes to remain anonymous.
[10] Ghosh, C. K., et al., Peptic Ulcer Disease in Bangladesh: A Multi-centre Study, January 2017, url, p. 141
[11] Saber, S., et al., Study on Socio-Demographic Profile of Peptic Ulcer Disease in A Tertiary Care Teaching Hospital, Dhaka, Bangladesh, February 2021, url, p. 12
[12] Perveen, I., et.al, Upper Gastrointestinal Symptoms in General Population of a District in Bangladesh, January 2014, url, p. 79

1.3. Irritable bowel syndrome (IBS), incidence and prevalence

The reported prevalence of IBS in the first study conducted in 2001 among people aged 15 years and older in the rural population in Bangladesh was 24.4 %.[13] A more recent study from 2022, done to determine prevalence of IBS within university students, reported a prevalence of 39.3 %.[14]

1.4. Pancreatitis, incidence and prevalence

Ahmed et al. conducted a study on the clinical features of pancreatitis. They found the male to female ratio was 1.78 : 1. The most common factors of causality for pancreatitis were gallstones (18 %) and alcoholism (10 %). The study population reported symptoms of abdominal pain, nausea and vomiting.[15] Pancreatitis was either acute or chronic. While acute pancreatitis may be mild to life threating, most deaths due this disease occurred when the disease progressed to severe acute pancreatitis. Overall mortality of the study population was 6 %.[16]

1.5. Inflammatory bowel disease (IBD), incidence and prevalence

IBD is a broad term that describes conditions characterised by chronic inflammation of the gastrointestinal tract. The two most common inflammatory bowel diseases are ulcerative colitis and Crohn's disease.[17]

1.5.1. Ulcerative colitis

A hospital-based study conducted between 1990 and 2010 at the Bangabandhu Sheikh Mujib Medical University (BSMMU) in Dhaka looked at patients who had previously been diagnosed, or who had been recently diagnosed, with ulcerative colitis. Study findings reveal that a higher proportion of males are affected (65.24 %) than females (34.76 %). 87.28 % of the study respondents had bloody diarrhoea, 20.12 % had per rectal bleeding, and 4.26 % had diarrhoea without per rectal bleeding.[18]

[13] Masud, M. A., et al., Irritable Bowel Syndrome in a Rural Community in Bangladesh: Prevalence, Symptoms Pattern, and Health Care Seeking Behavior, May 2001, url, p. 1547
[14] Das, A., et al., Prevalence of irritable bowel syndrome and its associated risk factors among university students of Bangladesh, June 2022, url, p. 421
[15] Ahmed, K. U., et al., Clinical profile of acute pancreatitis in a teaching hospital, March 2017, url, p. 7
[16] Ahmed, K. U., et al., Clinical profile of acute pancreatitis in a teaching hospital, March 2017, url, pp. 11-12
[17] CDC, Inflammatory bowel disease (IBD), 2023, url
[18] Chowdhury, M. S.et al., Clinical presentation of ulcerative colitis among Bangladeshi population twenty years' experience from a tertiary care hospital in Bangladesh, 2013, url, p. 19

1.5.2. Crohn's disease

A separate BSMMU study reviewed patients diagnosed with Crohn's disease from 1991 to 2010. The study identified arthritis, aphthous ulcers, erythema nodosum and episcleritis, which are extra intestinal clinical features of Crohn's disease. In this study, 70.7 % of the respondents were male and 29.3 % were female.[19]

1.6. Gastroesophageal reflux disease (GERD), incidence and prevalence

GERD usually presents clinically with burning sensation behind the chest (retrosternal) and / or regurgitation that mimics flow of acidic materials in the mouth, occasionally with difficulty in swallowing and sore throat with or without cough.[20]

A study on the prevalence and risk factors for GERD, between January and June 2015 in a rural community of Bangladesh, reported the prevalence of GERD to be 6.8 %. Study results show a higher prevalence in patients with diabetes, the elderly and specifically within the Muslim community.[21] Another study on GERD conducted in Northeast Bangladesh reported a prevalence of 5.5 % and the results showed a higher prevalence in females (6.73 %) as compared to males (4.41 %). The highest prevalence (18.8 %) of GERD was found in the age group of 55 to 65 years.[22]

1.7. Diseases of colon and rectum, incidence and prevalence

According to the cancer country profile (2020) of Bangladesh, colorectal cancer incidence and mortality in the country are 3.8 and 2.3 per 100 000 population. Colorectal cancer is ninth out of the 10 most common cancers in Bangladesh.[23] A BSMMU demographic and clinicopathological evaluation study found that the most common clinical features of colorectal cancers are rectal bleeding (38.7 %) and generalised weakness, and pale colour of the skin.[24] Another study on the symptoms of colorectal carcinoma conducted from 2009 to 2010 at BSMMU showed that per rectal bleeding was the most common (40 %) finding in patients.[25]

[19] Barua, R., et al., Extraintestinal Manifestations of Crohn's Disease in Bangladesh, 2010, url, p. 58
[20] Guarner et al., Maps of Digestive Disorders & Diseases, WGO, n.d., url, p. 7
[21] Ghosh, D. K., et al., Gastroesophageal Reflux Disease: Prevalence and Its Risk Factors in Rural Bangladesh, 2018, url, p. 45
[22] Shaha, M., et al., Prevalence and risk factors for gastro-esophageal reflux disease in the North-Eastern part of Bangladesh, 2012, url, p. 111
[23] WHO, IARC, Globocan, Bangladesh fact sheet, March 2021, url, p. 2
[24] Shiraj-Um-Mahmuda, S., et al., Demographic and Clinicopathological Evaluation of Colorectal Adenocarcinoma in Bangladesh at a Tertiary Level Hospital, January 2023, url, p. 1
[25] Raza, A. M., et al., Clinico-demographic Characteristics of Colorectal Carcinoma in Bangladeshi Patients, January 2016, url, p. 24

2. Access to treatment

Patients with any gastrointestinal symptoms, such as abdominal pain, discomfort and occasionally even diarrhoea, seek care at an *Upazila* or union healthcare centre, or a private healthcare facility, where they are clinically assessed and physically examined by the attending healthcare provider, following which investigations may be requisitioned as required. After the relevant investigation of stool, vomitus or blood samples, patients are confirmed for their exact diagnosis at these centres.[26]

With countrywide health network of *Upazila* health complexes and their downstream health facilities in the unions and below, the Ministry of Health and Family Welfare (MOHFW) in Bangladesh is able to provide health services for diseases of gastrointestinal system to its population. Private hospitals, clinics and private practice done by the doctors from public hospitals also meet demands of health service requirements for these patients. There are no cultural, geographical or ethnic barriers to access of treatment.[27]

With an increasing patient load due to the country's large population, waiting times to visit specialists for gastrointestinal diseases are likely to be high. The typical route for a patient with this disease is to visit the *Upazila* health complexes or their downstream health facilities and get advice from the attending health personnel about the need to see a specialist either in district health facilities or specialist hospitals. This causes issues in the system. On the other hand, they get right treatment at their earliest, which most of the time is desirable. The same scenario is applicable for a citizen returning to the country after having spent a number of years abroad.[28]

[26] Source A, telephone interview, 14 September 2023, Dhaka. Source A is a Professor of Medicine at Mymensingh Medical College. The person wishes to remain anonymous.
[27] Source A, telephone interview, 14 September 2023, Dhaka. Source A is a Professor of Medicine at Mymensingh Medical College. The person wishes to remain anonymous.
[28] Source A, telephone interview, 14 September 2023, Dhaka. Source A is a Professor of Medicine at Mymensingh Medical College. The person wishes to remain anonymous.

3. Cost of treatment

Patients are required to pay for each consultation either at outpatient departments (OPDs) or inpatient departments (IPDs), for diagnostic services and for hospital bed charges if hospitalised. This applies to both public and private health facilities. The waiver for any discounted payment for any of the elements of consultations either in OPD or IPD, hospital charges for admittance, and laboratory charges in the public hospitals and other healthcare facilities can be available if the Social Welfare Departments evaluate and certify. Private facilities have no provision to exempt patients from payment for any hospital service charge.[29] The EUAA MedCOI general report for the Bangladesh health system notes the high rate of out-of-pocket health expenditure across the country and that health expenditure is one of the main reasons for poverty and deprivation amongst low-income households.[30]

Official prices are fixed for laboratory investigations, fees for consultations, rents for patients' bed and operation charges in public facilities; these are strictly implemented. Health insurance coverage for diseases of the gastrointestinal system is not available in Bangladesh.[31]

For the treatments listed below, there is usually no exemption, but in public health facilities the Social Welfare Department can recommend a partial or full discount to the fee.[32]

Table 2. Prices for consultation[33]

Specialist	Public outpatient treatment price in BDT	Public inpatient treatment price in BDT	Private outpatient treatment price in BDT	Private inpatient treatment price in BDT
Gastroenterologist	300	500	1 200	1 800
Surgeon	300	500	1 200	1 800
Oncologist	300	500	1 200	1 800

[29] Source B, telephone interview, 20 September 2023, Dhaka. Source B is a Professor of Chest Diseases at LabAid Private Hospital in Dhaka. The person wishes to be anonymous.
[30] EUAA, Healthcare Provision in Bangladesh, June 2023, url, p. 39
[31] Source A, Professor of Medicine at Mymensingh Medical College, Telephone Interview, 14 September 2023
[32] Source B, telephone interview, 20 September 2023, Dhaka. Source B is a Professor of Chest Diseases at LabAid Private Hospital in Dhaka. The person wishes to be anonymous.
[33] Source B, telephone interview, 20 September 2023, Dhaka. Source B is a Professor of Chest Diseases at LabAid Private Hospital in Dhaka. The person wishes to be anonymous.

Table 3. Prices for treatments and diagnostic tests[34]

	Public treatment price in BDT	Private treatment price in BDT
Laboratory measurements		
Laboratory test: electrolytes: sodium, calcium, potassium, chloride, phosphate, and magnesium	300	800
Laboratory test: faecal calprotectin: stool test for intestinal inflammation/ disease activity	3 000	5 000
Laboratory test: lipid profile (total cholesterol, HDL cholesterol, LDL cholesterol, triglycerides)	600	1 500
Laboratory test: pancreas function (amylase, lipase)	900	1 200
Laboratory test: tumor marker: CEA (Carcinoembryonic antigen)	450	900
Laboratory test: reticulocytes counting in blood	300	600
Medical imaging		
Diagnostic imaging: oesophago-gastro-duodenoscopy	1 500	2 500
Diagnostic imaging: sigmoidoscopy	1 000	2 000
Ultrasound imaging of the abdomen	1 000	2 500
Diagnostic imaging: endoscopy	2 500	5 000
Diagnostic imaging: endoscopic ultrasound	1 000	3 000
Diagnostic imaging: colonoscopy	2 500	5 000
Diagnostic imaging: MRI scan	4 000	10 000

[34] Source B, telephone interview, 20 September 2023, Dhaka. Source B is a Professor of Chest Diseases at LabAid Private Hospital in Dhaka. The person wishes to be anonymous.

	Public treatment price in BDT	Private treatment price in BDT
Diagnostic imaging: integrated PET/CT- scan	4 000	5 500 to 10 000
Diagnostic imaging: computed tomography (CT) scan	4 000	10 000
Diagnostic imaging: computed tomography (CT) scan with contrast	5 000	10 000
Diagnostic imaging: endoscopic retrograde cholangiopancreaticography (ERCP)	5 000	15 000
Treatments		
Diagnostic test: gastric tissue biopsy	300	1 500
Diagnostic test: colon biopsy	1 400	2 500
Surgery; specifically gastrointestinal: colostomy operation and closure	13 500	40 000
Gastroenterology: enema	600	1 440
Surgery: specifically gastrointestinal surgery	7 500	15 000
Surgery, specifically fundoplication surgery for gastro-oesophageal reflux disease	22 500	100 000
Surgery: specific gastrointestinal: ileostomy	13 500	18 000
Surgery: specific gastrointestinal; (segmental) duodenal resection	13 500	30 000
Surgery: specific gastrointestinal; Whipple operation/procedure	100 000	800 000
Surgery: specifically gastrointestinal: to restore bile drainage	12 500	30 000
Surgery; specifically gastrointestinal: colostomy operation and closure	13 500	40 000

	Public treatment price in BDT	Private treatment price in BDT
Oncology: radiation therapy	15 000 per session	50 000 per session

4. Cost of medication

Prices from online medicine shops are provided in Table 5. Cost of medications. These are taken from the following websites:

Table 4. Online medicine websites

Website name	Web address
Lazz Pharma Limited	https://www.lazzpharma.com
MedEx	https://medex.com.bd
ePharma	https://epharma.com.bd
Arogga	https://www.arogga.com

Relating to all medicines in the table below; medication prices are usually not reimbursed by any public health insurance mechanisms, but the Social Welfare Department can recommend free or partial payment for the public facilities.[35]

[35] Source B, telephone interview, 20 September 2023, Dhaka. Source B is a Professor of Chest Diseases at LabAid Private Hospital in Dhaka. The person wishes to be anonymous.

Table 5. Cost of medications

Generic Name	Brand name	Strength of unit	Form	Number of units in the container	Price per box in BDT	Place (pharmacy, hospital,...)
For constipation / laxatives						
Macrogol + electrolytes [KCl, NaCl, $NaHCO_3$ (=bicarbo-nate)]	GOL™	13.125 gm macrogol, 178.500 gm potassium chloride, 350.700 gm, sodium bicarbonate, 46.600 gm sodium chloride	Suspension	1	160	Pharmacy
Sodium phosphate (as enema)	Anema®	(7 gm dibasic sodium phosphate, 19 gm monobasic sodium phophate) /118 ml	Liquid	1	250	Pharmacy
Sodium acid phosphate	Phospho-prep®	(2.711 gm sodium dihydrogen phosphate, 1.2 gm disodium hydrogen phophate) /5 ml	Liquid	1	230	Pharmacy
Sodium lauryl sulfoacetate / sodium citrate / sorbitol enema Microlax®	Micolett®	133 ml	Liquid	1	250	Pharmacy
Lactulose	Avolac®	100 ml	Liquid	1	170	Pharmacy
Lactitol	Fibolac®	10 g	Powder	1	40	Pharmacy
Bisacodyl	Duralax®	5 mg	Tablet	20	142	Pharmacy

Generic Name	Brand name	Strength of unit	Form	Number of units in the container	Price per box in BDT	Place (pharmacy, hospital,...)
Sodium picosulfate	Abdolax®	10 mg	Tablet	30	300	Pharmacy
Psyllium seeds	Ispergul®	3.5 g	Powder	15	150	Pharmacy
Antibiotics						
Amoxicillin	Moxacil®	500 mg	Capsule	10	75	Pharmacy
Clarithromycin	Clarimax®	250 mg	Capsule	10	270	Pharmacy
Metronidazole	Nidazyl®	400 mg	Tablet	10	170	Pharmacy
Tinidazole	T-zol™	500 mg	Tablet	10	28	Pharmacy
Tetracycline	Tetrasina®	250 mg	Tablet	10	17	Pharmacy
Levofloxacin	Levoflox	750 mg	Tablet	10	201	Pharmacy
Aminosalicylates						
Sulfasalazine	Salazine®	500 mg	Suppository	10	100	Pharmacy
Mesalazine	Mesacol®	400 mg	Tablet	50	379	Pharmacy
Corticosteroids						
Betamethasone	Bet-A®	0.5 mg	Tablet	100	85	Pharmacy
Prednisolone	Predni-solone®	5 mg	Tablet	200	240	Pharmacy
Methylprednisolone	Depomed®	4 mg	Tablet	50	300	Pharmacy
Histamine-2-receptor antagonists						
Cimetidine	G-Cimetidine®	200 mg/2 ml	Injection	10	60	Pharmacy
Famotidine	Famotack®	20 mg	Tablet	100	200	Pharmacy

Generic Name	Brand name	Strength of unit	Form	Number of units in the container	Price per box in BDT	Place (pharmacy, hospital,...)
Immunosuppressants						
Azathioprine	Imruza®	50 mg	Tablet	30	600	Pharmacy
Ciclosporin	Neoral®	100 mg	Capsule	50	11 700	Pharmacy
Tacrolimus	Crilomus®	1 mg	Capsule	50	2 500	Pharmacy
Metho-trexate	Meth®	2.5 mg	Tablet	28	112	Pharmacy
Mycophen-olate mofetil	Graftcept®	500 mg	Tablet	30	1 950	Pharmacy
Antacids						
Sodium alginate + sodium bicarbonate + calcium carbonate	Ariscon®	(500 mg sodium alginate, 267 mg $NaHCO_3$, 160 mg calcium carbonate) /10 ml	Suspension	200 ml	250	Pharmacy
Magnesium hydroxide + aluminium oxide	Acedone-Z®	400 mg magnesium hydroxide, 250 mg aluminium	tablet	200	106	Pharmacy
Proton Pump Inhibitor						
Esome-prazole	Esigerd®	20 mg	Tablet	50	250	Pharmacy
Omeprazole	Losectil®	20 mg	Capsule	120	600	Pharmacy
Panto-prazole	Panprazo®	20 mg	Tablet	50	225	Pharmacy
Lanso-prazole	Lansec®	30 mg	Capsule	50	302	Pharmacy
TNF alpha blockers						
Adalimumab	Adalimab	40 mg/0.8 ml	Injection	1	15 000	Pharmacy

Generic Name	Brand name	Strength of unit	Form	Number of units in the container	Price per box in BDT	Place (pharmacy, hospital,...)
Infliximab	Remicade®	100 mg/20 ml	Injection	1	32 554	Pharmacy
Golimumab	Simponi®	50 mg/0.5 ml	Injection	1	51 131	Pharmacy
Etanercept	Etacept®	50 mg/ml	Injection	1 ml	13 635	Pharmacy
Against diarrhea						
Loperamide	Lopamid®	2 mg	Capsule	100	100	Pharmacy
Colestyra-mine	Hepacol®	4 g	tablet	60	1 866	Pharmacy
Octreotide	Sandostatin®	50 mcg/ml	Injection	5	1 810	Pharmacy
Bismuth	Bispep®	87.5 mg/5 ml	Suspension	100 ml	75	Pharmacy
Subsali-cylate	Peptocid®	87.5 mg/5 ml	Suspension	200 ml	95	Pharmacy
Gastroprotection						
Sucralfate	Protecto®	1 000 mg	Tablet	50	300	Pharmacy
Misoprostol	Indula®	200 mcg	Tablet	30	450	Pharmacy

Annex 1: Bibliography

Oral sources, including anonymous sources

Source A, telephone interview, 14 September 2023, Dhaka. Source A is a Professor of Medicine at Mymensingh Medical College. The person wishes to remain anonymous.

Source B, telephone interview, 20 September 2023, Dhaka. Source B is a Professor of Chest Diseases at LabAid Private Hospital in Dhaka. The person wishes to be anonymous.

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Annex 2: Terms of Reference (ToR)

Gastroenterology

Note for drafters: These are guidelines on the information to be included. If one aspect is not relevant, e.g., there is no national institute to treat this disease or no international donor programme, there is no need to mention it. Keep the focus on treating medicine – preventive care can be mentioned but is of less interest to the target group.

General information

- Briefly describe prevalence and incidence of gastrointestinal diseases (gastroesophageal reflux disease, peptic ulcer, inflammatory bowel disease, stomach and colorectal cancers / types of this disease (epidemiologic data).
- How is the health care organized for gastrointestinal diseases?
- How are gastrointestinal diseases treated – at specific centres, in primary health care centres, secondary care / hospitals, tertiary care etc.?
- Which kinds of facilities can treat gastrointestinal diseases [public, private not for profit (e.g., hospitals run by the church), private for-profit sector]? Include links to facilities' websites if possible.
- How are the resources organized in general to treat patients with gastrointestinal diseases? Are there sufficient resources available to treat all patients?
- Is there a particular type of gastrointestinal diseases for which no (or only partial) treatment exists in the country?
- Is there a (national) institute specialised in treating gastrointestinal diseases?
- Are there any national or international plans or (donor) programmes for gastrointestinal diseases; if yes, could you elaborate on such programme(s) and what it entails?

Access to treatment

- Are there specific treatment programmes for gastrointestinal diseases? If so, what are the eligibility criteria to gain access to it and what they contain?
- Are there specific government (e.g., insurance or tax) covered programmes for gastrointestinal diseases? If so, what are the eligibility criteria to gain access to it?
- Are there any factors limiting the access to healthcare for patients? If so, are they economic, cultural, geographical, etc.? Are there any policies to improve access to healthcare and/or to reduce the cost of treatments and/or medication? What is the number of people having access to treatment? Keep focus on e.g., waiting times rather than the exact number of specialists in the field.
- If different from information provided in the general section; is the treatment geographically accessible in all regions?
- What is the 'typical route' for a patient with this disease (after being diagnosed with the disease)? In other words: for any necessary treatment, where can the patient find help

and/or specific information? Where can s/he receive follow-up treatment? Are there waiting times for treatments (e.g., colonoscopy, consultation by a gastroenterologist, etc)?
- What must the patient pay and when?
- Is it the same scenario for a citizen returning to the country after having spent a number of years abroad?
- What financial support can a patient expect from the government, social security or a public or private institution? Is treatment covered by social protection or an additional / communal health insurance? If not, how can the patient gain access to a treatment?
- Any occurrences of healthcare discrimination for people with this disease?

Insurance and national programmes

- National coverage (state insurance).
- Programmes funded by international donor programmes, e.g., Gates foundation, Clinton foundation etc.
- Include any insurance information that is specific for patients with this disease.

Cost of treatment

Guidance / methodology on how to complete the tables related to treatments:

- Do not delete any treatments from the tables. Instead state that they are not available or information could not be found if that is the case.
- In the table, indicate the price for inpatient and outpatient treatments in public and private facilities and if the treatments are covered by any insurance or by the state.
- For inpatient, indicate what is included in the cost (bed / daily rate for admittance, investigations, consultations…). For outpatient treatment, indicate follow up or consultation cost.
- Is there a difference in respect to prices between the private and public facilities?
- Are there any geographical disparities?
- Are the official prices adhered to in practice?
- Include links to online resources used, if applicable (e.g., hospital websites).

Note: a standardised list of treatments was also included in the original ToR, as can be viewed in the report. Any treatment without a found price was removed at the editorial stage.

Cost of medication

Guidance / methodology on how to complete the tables related to medications:

- Do not delete any medicines from the tables. Instead, state that they are not available or information could not be found if that is the case.
- Are the available medicines in general accessible in the whole country or are there limitations?

- Are the medicines registered in the country? If yes, what are the implications of it being registered?
- Indicate in the tables: generic name, brand name, strength of unit, form, pills per package, official prices, source, insurance coverage.
- Are (some of the) medicines mentioned on any drug lists like national lists, insurance lists, essential drug lists, hospital lists, pharmacy lists etc.? If so, what does such a list mean specifically in relation to coverage?
- Are there other kinds of coverage, e.g., from national donor programmes or other actors?
- Include links to online resources used, if applicable (e.g., online pharmacies).

Note: a standardised list of medication was also included in the original ToR, as can be viewed in the report. Any medication without a found price was removed at the editorial stage.

NGOs (include if relevant, otherwise delete section)

- Are any NGOs or international organisations active for patients with gastroenterology diseases? What are the conditions to obtain help from these organisations? What help or support can they offer?
- Which services are free of charge and which ones are at a cost? Is access provided to all patients or access is restricted for some (e.g., in case of faith-based institutions or in case of NGOs providing care only to children for instance).

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