



Ghana

Gastroenterology

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Gastroenterology

MedCOI

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The report has been reviewed by International SOS and EUAA.





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Disclaimer

This report was written according to the EUAA COI Report Methodology (2023). The report is based on publicly available sources of information, as well as oral anonymised sources who are based in Ghana. 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.

On 19 January 2022 the European Asylum Support Office (EASO) became the European Union Agency for Asylum (EUAA). All references to EASO, EASO products and bodies should be understood as references to the EUAA.

The drafting of this report was finalised on 27 March 2024. Any event taking place after this date is not included in this report. More information on the reference period for this report can be found in the methodology section of the Introduction.





Glossary and abbreviations

Term	Definition
CEA	Carcinoembryonic Antigen
CHPS	Community-Based Health Planning and Services
CRC	Colorectal Cancer
CT	Computed Tomography
ERCP	Endoscopic Retrograde Cholangiopancreatography
FDA	Food and Drugs Authority
GDD	Gastro-Duodenal Disease
GERD	Gastroesophageal Reflux Disease
HDL	High-Density Lipoprotein
IBD	Inflammatory Bowel Disease
KATH	Komfo Anokye Teaching Hospital
KBTH	Korle Bu Teaching Hospital
KCI	Potassium Chloride
LDL	Low-Density Lipoprotein
MOH	Ministry of Health
MRI	Magnetic Resonance Imaging





Term	Definition
NaCl	Sodium Chloride
NaHCO₃	Sodium Bicarbonate
NHIS	National Health Insurance Scheme
PET	Positron-Emission Tomography
PHC	Primary Healthcare
PPI	Proton Pump Inhibitor
PUD	Peptic Ulcer Disease
TNF	Tumour Necrosis Factor





Introduction

Methodology

The purpose of the report is to provide information on access to gastrointestinal diseases treatment in Ghana. 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 were developed by EUAA.

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 was finalised on 9 November 2023, peer review occurred between 10 November – 22 December 2023, and additional information was added to the report as a result of the quality review process during the review implementation up until 27 March 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 Ghana.

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 multiple oral sources with ground-level knowledge of the healthcare situation in Ghana 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.

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](#)





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 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 and academic publications. All sources that are used in this report are outlined in Annex 1: Bibliography.

Key informant interviews were carried out in September 2023. Interviews were conducted mainly with officers who work within organisations of Ghana's healthcare system. A complete anonymised list of interviewees can be found in the Annex 1: Bibliography.



1. Incidence and prevalence of gastrointestinal diseases

Gastroenterology is a medical speciality that focuses on the digestive system and its disorders. This report looks at the management of gastrointestinal diseases in Ghana with respect to the following conditions: gastroesophageal reflux disease (GERD), peptic ulcer, inflammatory bowel disease (IBD), stomach cancer and colorectal cancer (CRC).

1.1. Gastroesophageal reflux disease (GERD)

Between 1990 and 2017, the age-standardised prevalence of gastroesophageal reflux disease (GERD) per 100 000 population decreased marginally from 9 974.1 to 9 971.5.⁴

1.2. Peptic ulcer

There is a lack of cohort studies drawn from the general population, making accurate evaluation of incidence of gastro-duodenal disease (GDD) in Africa elusive.⁵ The age-standardised prevalence rate estimated for peptic ulcer disease (PUD) (globally) in 2019 ranged from 15.19 to 330.32 per 100 000 population; for Ghana it was much lower, ranging from 0.43 to 1.26.⁶

In Ghana, Komfo-Anokye Teaching Hospital (KATH), Kumasi, which serves the central-northern regions, has a lower incidence of PUD in comparison with Korle Bu Teaching Hospital (KBTH), Accra, which serves the southern regions of Ghana, (Accra: 19.6 % vs Kumasi: 3 %).⁷

A study in Ghana found that the mean age of patients with GDD (which includes PUD) was 51.4 years, with a median age of 52 years and a range of 15 to 95 years.⁸

⁴ GBD 2017 Gastro-oesophageal Reflux Disease Collaborators, The global, regional, and national burden of gastroesophageal reflux disease in 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017, June 2020, [url](#), p. 573

⁵ Archampong, T. N., et al., Gastro-duodenal disease in Africa: Literature review and clinical data from Accra, Ghana, [url](#), p. 3352

⁶ Xie, X., et al., The global, regional and national burden of peptic ulcer disease from 1990 to 2019: a population-based study, February 2022, [url](#), p. 6

⁷ Archampong, T. N., et al., Gastro-duodenal disease in Africa: Literature review and clinical data from Accra, Ghana, [url](#), p. 3347

⁸ Archampong, T. N. A., et al., Factors associated with gastro-duodenal disease in patients undergoing upper GI endoscopy at the Korle-Bu Teaching Hospital, Accra, Ghana, June 2016, [url](#), p. 613



1.3. Inflammatory bowel disease (IBD)

The community prevalence of inflammatory bowel disease (IBD) in Ghana is not known.⁹ In Ghana, consistently more males than females are affected with IBD. The age cohort prevalence was fairly even across all age cohorts within the period 1997 to 2004, but now over the period 2004 to 2011, 39.3 % and 25 % are found in the age group 20 to 30 and 31 to 40 years, respectively, with the rest of the case fairly evenly spread across the other age cohorts.¹⁰ Although relatively uncommon, IBD incidence rose by 65 % over the period 1997 to 2004 and 2004 to 2011.¹¹ Non-specific chronic colitis, ulcerative colitis and Crohns' disease account for 50 %, 42.9 % and 7.1 %, respectively, of diagnosed IBD.¹²

1.4. Stomach cancer and colorectal cancer (CRC)

Stomach cancers in Ghana is among the most prevalent new gastrointestinal cancers recorded in the year 2020.¹³ Stomach cancers are more prevalent in males than females in Ghana.¹⁴

There are varying prevalence or incidence rates for colorectal cancer (CRC) depending on the study referenced. The number of new cases of CRC has increased: in the 1960s, there were 4.1 new cases each year;¹⁵ a study of confirmed cases of colorectal cancer diagnosed between January 1997 and December 2007 in Accra, found an annual incidence of 32.6 new cases and a crude incidence rate of 11.18 per 100 000 over this 11-year span. Over the same time period, the crude incidence rates per 100 000 were found to differ between males (12.53) and females (9.87).¹⁶

A study published in 2017 found that the overall crude annual incidence of CRC at a teaching hospital in Kumasi, Ghana, was 4.62 per 100 000 populations.¹⁷

⁹ CGKII101, Consultant Gastroenterologist, Interview, September 2023

¹⁰ Archampong, T. N. A. and Nkrumah, K. N., Inflammatory bowel disease in Accra: what new trends?, 2013, [url](#), p. 44

¹¹ Archampong, T. N. A. and Nkrumah, K. N., Inflammatory bowel disease in Accra: what new trends?, 2013, [url](#), p. 40

¹² Archampong, T. N. A. and Nkrumah, K. N., Inflammatory bowel disease in Accra: what new trends?, 2013, [url](#), p. 42

¹³ Boi-Dsane, N. A. A., et al., Cross-Sectional Study for Investigation of the Association Between Modifiable Risk Factors and Gastrointestinal Cancers at a Tertiary Hospital in Ghana, March 2023, [url](#), p. 8

¹⁴ Boi-Dsane, N. A. A., et al., Cross-Sectional Study for Investigation of the Association Between Modifiable Risk Factors and Gastrointestinal Cancers at a Tertiary Hospital in Ghana, March 2023, [url](#), p. 2

¹⁵ Agyemang-Yeboah, F., et al., Colorectal cancer survival rates in Ghana: A retrospective hospital-based study, December 2019, [url](#), p. 2

¹⁶ Dakubo, J.C, et al., Colorectal carcinoma: an update of current trends in Accra, 2010, [url](#), p. 179

¹⁷ Agyemang-Yeboah, F., et al., Patterns and presentations of colorectal cancer at Komfo-Anokye teaching hospital Kumasi, Ghana, October 2017, [url](#), p. 2





The studies in Ghana have shown that there is a significant difference in the survival rate of CRC according to the different stages.¹⁸ The median survival time was 15 months. The overall survival rate for CRC over the five-year period was 16 %. This indicates that 16 % of patients with CRC were alive after five years.¹⁹

2. Access to treatment

Ghana has a pluralistic health sector in terms of ownership (public and private) and in terms of healthcare models (orthodox, traditional and alternative medicine).²⁰ Healthcare services are provided by the public sector, as well as by private sector service providers made up of for-profit providers and non-profit faith-based health facilities.²¹ The health system is organised in three levels: the primary level, with a focus on primary healthcare (PHC) services, includes the community-based health planning and services (CHPS) compound, the sub-district health centre/clinic and the district hospital. The secondary and tertiary levels have regional and teaching hospitals, respectively.²²

Public and private facilities, at all levels of the health system, can provide care within limits set by the Standard Treatment Guidelines 2017.²³ The primary level of care has the capacity to identify and make differential diagnosis of some of the conditions. This capacity is mostly at the district hospital level where they can more definitively diagnose, commence basic care and may refer the patient to the appropriate secondary or tertiary facility for definitive case management. All patients can access care at the nearest point of service to them at any level of the health system. Based on the severity of the condition and the capacity of the point of service to manage the condition, care will be continued, or the patient will be referred to the next higher level of care for further appropriate case management. Patients can however walk into any emergency room in any secondary or tertiary facility and will be attended to.²⁴

Treatment is geographically accessible in all the regions but more so in urban towns. This is primarily because of the presence of secondary and/or tertiary facilities, providing better access to specialist services compared to rural areas. There are no restrictions to patients' access to treatment; everyone has access to all services that are available at all levels of the health system. In general, the most significant barriers to treatment access for all the conditions include unavailability of the treatment needed, which is limited by the level of care at which it is sought and the staff expertise available, and inability to pay for the care available. Here, patients who have registered with the National Health Insurance Scheme (NHIS) or private medical insurance schemes will have their cost of care (either inpatient or outpatient)

¹⁸ Agyemang-Yeboah, F., et al., Colorectal cancer survival rates in Ghana: A retrospective hospital-based study, December 2019, [url](#), p. 1

¹⁹ Agyemang-Yeboah, F., et al., Colorectal cancer survival rates in Ghana: A retrospective hospital-based study, December 2019, [url](#), p. 1

²⁰ Ghana, MOH, National Health Policy: Ensuring healthy lives for all (Revised Edition), January 2020, [url](#), p. 23

²¹ Ghana, MOH, Health Sector Medium Term Development Plan 2022-2025, December 2021, [url](#), p. 11

²² Ghana, MOH, Health Sector Medium Term Development Plan 2022-2025, December 2021, [url](#), p. 11

²³ Ghana, MOH, GNDP, Standard Treatment Guidelines, Seventh Edition, 2017, [url](#), pp. 22-27

²⁴ CGKII101, Consultant Gastroenterologist, Interview, September 2023





covered, as determined by their insurance package, while those without any form of insurance will have to pay out of pocket for these services. Private health insurance schemes provide a better coverage in terms of services that will be paid for and cost of services than the NHIS.²⁵

The available treatment options for PUD and GERD in Ghana include proton pump inhibitors (PPI), lifestyle and dietary changes, and surgery (in severe cases); for stomach cancer and CRC, the available treatment options include surgery, chemotherapy, adjuvant therapy, and screening; and for IBD, the available treatment options include medications, surgery, and lifestyle and dietary changes.²⁶

Currently, in Ghana, there are endoscopic services in tertiary medical centres but not at most regional or district hospitals.²⁷

2.1. Insurance and national programmes

The public NHIS and private health insurance schemes cover both inpatient and outpatient cost of care to different degrees, with the private schemes generally providing more cover than the NHIS.²⁸ The NHIS covers the consultation fees for all general and specialist clinic attendances, as well as hospital admission (bed and feeding) are covered. A limited number of laboratory tests are covered but the cost of specialised laboratory and diagnostic imaging investigations and treatment are not covered by the NHIS and must be paid for by private insurance schemes or out of pocket.²⁹

As of 2019, the NHIS had a membership of over 12 million Ghanaian.³⁰ The NHIS is available for registration to all individuals living in Ghana.³¹

3. Cost of treatment

The cost of treatment in the public sector is primarily regulated by the NHIS. The NHIS tariffs are expected to be the official fees and charges in public facilities. This is often not adhered to because the insurance tariffs are below the market prices. Facilities, mainly the teaching hospitals, will go on to secure parliamentary approval for higher rates for fees and charges that the NHIS tariffs are unable to fully cover. These additional fees and charges are paid out of pocket by patients. Other public facilities will have instances where staff request for unofficial fees and charges for services rendered.³² The cost of treatment in the private sector

²⁵ CGKII101, Consultant Gastroenterologist, Interview, September 2023

²⁶ CGKII101, Consultant Gastroenterologist, Interview, September 2023

²⁷ Archampong, T. N., et al., Gastro-duodenal disease in Africa: Literature review and clinical data from Accra, Ghana, July 2019, [url](#), p. 3346

²⁸ CGKII101, Consultant Gastroenterologist, Interview, September 2023

²⁹ CGKII101, Consultant Gastroenterologist, Interview, September 2023

³⁰ NHIS, NHIS active membership soars, July 2020, [url](#)

³¹ CGKII101, Consultant Gastroenterologist, Interview, September 2023

³² CGKII101, Consultant Gastroenterologist, Interview, September 2023



is not regulated and different service providers set different fees and charges that enable them to, at least, fully recover their costs. These fees and charges may be revised at any time, and the revisions are primarily influenced by foreign exchange rates and market forces.³³

The public facilities' prices are derived from the NHIS tariffs for tertiary hospitals (2023).³⁴ Information for the private sector prices, as well as on insurance and reimbursement information, is provided by Interviewee CGKII102.³⁵

Concerning the coverage and reimbursement of the treatment prices in Table 1 and Table 2 below, the following principles apply to all listed treatments:

1. Public and some private sector facility treatment prices are covered by NHIS and sometimes private insurance.
2. If insured, on presentation of one's insurance card, whether NHIS or private, no payment is made by the patient, as the insurance company re-imburses the facility at a later date on submission of claims.
3. In public facilities, any price difference between the listed NHIS tariffs and the price asked by the facility is borne by the patient (some facilities obtain parliamentary approval to increase their prices). In private facilities where NHIS coverage is accepted, the price difference between the NHIS tariffs and the private price is borne by the patient.
4. Uninsured patients pay out of pocket for all services at public and private facilities.

Table 1. Cost of gastroenterology specialist consultations in public tertiary and private health facilities

Specialist	Public outpatient treatment price in GHS	Public inpatient treatment price in GHS	Private outpatient treatment price in GHS	Private inpatient treatment price in GHS
Gastroenterologist	147	128 (cost of admission, not including consultation fee)	280 to 400	600 to 1 000
Surgeon	147	128 (cost of admission, not including consultation fee)	280 to 400	600 to 1 000

³³ CGKII102, Administrator of a Private Hospital, Interview, September 2023

³⁴ NHIS tariffs for tertiary hospitals (2023)"

³⁵ CGKII102, Administrator of a Private Hospital, Interview, September 2023



Specialist	Public outpatient treatment price in GHS	Public inpatient treatment price in GHS	Private outpatient treatment price in GHS	Private inpatient treatment price in GHS
Oncologist	147	128 (cost of admission, not including consultation fee)	300 to 400	600 to 1 000

Table 2. Cost of gastroenterology laboratory, diagnostic imaging and specialist treatment interventions in public tertiary and private health facilities

	Public treatment price in GHS	Private treatment price in GHS
Laboratory test: electrolytes: sodium, calcium, potassium, chloride, phosphate, and magnesium	Sodium – 20 Calcium – 40 Potassium – 20 Chloride – 20 Phosphate – 30 Magnesium – 30	Sodium – 30 to 45 Calcium – 60 to 70 Potassium – 30 to 40 Chloride – 30 to 40 Phosphate – 40 to 50 Magnesium – 40
Laboratory test: reticulocytes counting in blood	36	100 to 130
Laboratory test: tumor marker: CEA (Carcinoembryonic antigen)	84	150 to 170
Laboratory test: pancreas function (amylase, lipase)	Amylase – 45 Lipase – 46	Amylase – 140 to 155 Lipase – 100 to 130
Laboratory test: lipid profile (total cholesterol, HDL cholesterol, LDL cholesterol, triglycerides)	77	100 to 130



	Public treatment price in GHS	Private treatment price in GHS
Laboratory test: faecal calprotectin: stool test for intestinal inflammation/ disease activity	78	90 to 110
Diagnostic imaging: oesophago-gastro-duodenoscopy	520	Not found
Diagnostic imaging: sigmoidoscopy	350	Not found
Diagnostic imaging: MRI scan	978	995 to 1 100
Diagnostic imaging: computed tomography (CT scan) with contrast	1 268	1 750 to 2 100
Diagnostic imaging: colonoscopy	560	800 to 1 100
Diagnostic imaging: computed tomography (CT scan)	490	1 100 to 1 300
Diagnostic imaging: endoscopy	560	Not found
Diagnostic test: colon biopsy	700	1 700 to 2 500
Oncology: radiation therapy	10 000 to 15 000	30 000 to 40 000
Surgery; specifically gastrointestinal: colostomy operation and closure	1 612	8 000 to 15 000
Surgery: specific gastrointestinal; (segmental) duodenal resection	1 900	8 000 to 15 000
Surgery: specific gastrointestinal: ileostomy	1 600	8 000 to 15 000



	Public treatment price in GHS	Private treatment price in GHS
Surgery, specifically fundoplication surgery for gastroesophageal reflux disease (GERD)	Not found	8 000 to 15 000
Surgery: specifically gastrointestinal surgery	1 900	8 000 to 15 000
Gastroenterology: enema	400	500 to 900
Surgery; specifically gastrointestinal: colostomy operation and closure	1 600	8 000 to 15 000
Diagnostic test: gastric tissue biopsy	700	1 700 to 2 500

4. Cost of medication

The cost of medication in the public sector is regulated by the NHIS medicines' list.³⁶ The NHIS medicines' list is expected to include the official charges for medicines in public facilities. This is often not adhered to because the insurance tariffs are below the market prices. Facilities, mainly the teaching hospitals, will go on to secure parliamentary approval for higher fees and charges to ensure they are able to recover the cost of services and medicines that the NHIS may not fully cover. These additional fees and charges are paid out of pocket by patients.³⁷

The cost of medicines in the private sector is not regulated, and different service providers set different fees and charges that enable them to, at least, fully recover their costs. These fees and charges may be revised at any time and the revisions are primarily influenced by foreign exchange rates.

The cost of medication is generally higher in private facilities as compared to public facilities, and also increases from primary to tertiary level of care.³⁸ Most medicines are available in the whole country. The private sector pharmacies maintain a more complete stock of medicines

³⁶ NHIS, Medicine List, February 2023, [url](#)

³⁷ CGKII101, Consultant Gastroenterologist, Interview, September 2023, Accra

³⁸ CGKII101, Consultant Gastroenterologist, Interview, September 2023, Accra



than public facilities and medicines are more readily available in urban versus rural communities.³⁹

Mostly, medicines found in the country are registered by the Food and Drugs Authority (FDA) for use which means that the quality of the medicines can be assured. For a product to be registered, it must have gone through and passed the rigorous testing and product source verification processes carried out by the FDA of Ghana. However non-registered, as well as fake, medicines are also found in the country. Some of the medicines are on the Essential Medicines List and the National Health Insurance Medicines List. Their inclusion on the list encourages pharmacies and health facilities to stock them, reducing situations when stocks run out.⁴⁰

In situations where medicines are not available in the country, citizens may make arrangements for friends and family living abroad to purchase and send to them these medicines or they may seek the support of pharmacies to order the medicines for them. These scarce medicines may or may not be registered by the FDA. These medications are often prescription-only medications and often need to be accompanied by the prescription.⁴¹

In Table 3, '*Pharmacy*' refers to the private sector and '*Hospital*' refers to the public sector. Public facilities prices are based on the NHIS medicines' list.⁴² No brand names are covered under the medicines' list.⁴³ Prices for private facilities as well as information on insurance and reimbursement are provided by interviewee CGKII103.⁴⁴

Concerning the coverage and reimbursement of the medication prices in the table below, the following principles apply:

1. Both public and private sector prices can be covered by NHIS or/and private insurance.
2. If insured, on presentation of one's insurance card, whether NHIS or private, no payment is made by the patient, as the insurance company re-imburses the facility at a later date on submission of claims.
3. In private facilities, where NHIS coverage is accepted, the price difference between the NHIS tariffs and the private price is borne by the patient.
4. Uninsured patients pay out-of-pocket for all medications at public and private facilities.

³⁹ CGKII101, Consultant Gastroenterologist, Interview, September 2023, Accra

⁴⁰ CGKII103, Pharmacist of a Private Hospital, Interview, September 2023, Accra

⁴¹ CGKII103, Pharmacist of a Private Hospital, Interview, September 2023, Accra

⁴² NHIS, Medicine List, February 2023, [url](#)

⁴³ CGKII103, Pharmacist of a Private Hospital, Interview, September 2023, Accra

⁴⁴ CGKII103, Pharmacist of a Private Hospital, Interview, September 2023, Accra



Table 3. Cost of medicines in both public and private sectors

Generic Name	Brand name	Strength of unit	Form	Number of units in the container	Price per box price in GHS	Place (pharmacy, hospital,...)
Omeprazole	Acidom®	20 mg	tablet	10	32	Pharmacy
Esomeprazole	Nexium™	20 mg	tablet	14	282	Pharmacy
	Esomeprazole	20 mg	tablet	30	184	Hospital
Pantoprazole	Pantodenk®	20 mg	tablet	28	86.8	Pharmacy
Aluminium hydroxide	Aluminium hydroxide	500 mg	tablet	10	1.3	Pharmacy
Amoxicillin	Exeter™	500 mg	capsule	21	27.3	Pharmacy
	Amoxicillin	500 mg	capsule	500	61.6	Hospital
Tetracycline	Tetracycline	500 mg	capsule	10	4.5	Pharmacy
Metronidazole	Flagyl®	400 mg	tablet	14	193	Pharmacy
Clarithromycin	Fromilid®	500 mg	tablet	14	91	Pharmacy
Mesalazine	Pentasa®	1 g	tablet	60	1142	Pharmacy
Sulfasalazine	Salazopyrin®	500 mg	tablet	100	1232	Pharmacy
Corticosteroids	Prednisolone	5 mg	tablet	28	16.8	Pharmacy
Prednisone	Prednisone	5 mg	tablet	100	15	Hospital
Azathioprine	Azathioprine	25 mg	tablet	28	140	Pharmacy
Ciclosporin	Neoral®	100 mg	capsule	30	935	Pharmacy
Tacrolimus	Prograf®	0.5 mg	capsule	50	405	Pharmacy
Loperamide	Imodium®	2 mg	capsule	6	32	Pharmacy
	Colodium®	2 mg	capsule	10	6	Hospital
Colestyramine	Questran™	4 g	powder	50 sachets	590	Pharmacy





Generic Name	Brand name	Strength of unit	Form	Number of units in the container	Price per box price in GHS	Place (pharmacy, hospital,...)
Octreotide	Sandostatin®	50 mcg/ml	injection	1	156.6	Pharmacy
Bismuth subsalicylate	Peptobismol®	200 ml	Suspension	1	185	Pharmacy
Macrogol	Movicol	13.8gm	powder	20	426	Pharmacy
Macrogol + electrolytes [KCl, NaCl, NaHCO ₃ (=bicarbonate)]	Macrogol + electrolytes	13.8 gm	sachet	1	12	Pharmacy
Lactulose	Lactulex™®	200 ml	liquid	1	94.9	Pharmacy
Bisacodyl	Dulcolax®	10 mg	Suppository	12	90	Pharmacy
Sucralfate	Sucralfate O®	1 gm/10 ml	Suspension	1	27.5	Pharmacy
Misoprostol	Cytotec®	200 mcg	tablet	1	3.8	Pharmacy





Annex 1: Bibliography

Oral sources, including anonymous sources

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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 these diseases (epidemiologic data).
- How is the health care organized for gastrointestinal diseases?
- How is these diseases treated – at specific centres, in primary health care centres, secondary care / hospitals, tertiary care etc.?
- Which kinds of facilities can treat these 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 these 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?

- 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 gastrointestinal diseases?

Insurance and national programmes

- National coverage (state insurance).
- Programmes funded by international donor programmes, e.g., Global Fund, UNAIDS, UNICEF, 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 facility 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 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, dosage, 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

- Are any NGOs or international organisations active for patients with gastrointestinal 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).



