

**STANDARD TREATMENT GUIDELINES
AND
ESSENTIAL DRUGS LIST
FOR
SOUTH AFRICA**

**ADULT
HOSPITAL LEVEL**

1998 EDITION

Copies may be obtained from:
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NOTE

The information presented in these guidelines conforms to current medical, nursing and pharmaceutical practice. It is provided in good faith. Contributors and editors cannot be held responsible for errors, individual responses to drugs and other consequences.

FOREWORD

HOSPITAL LEVEL

Transformation of health care delivery is a national commitment. Conceptually, the process is advanced, and is being consolidated by the relevant legislative machinery. Translation of the philosophy into practical aspects is essentially a long-term issue, although there are already visible changes in some areas. The National Drug Policy (NDP) is one comprehensive strategy in the transformation of Pharmaceutical Services. It is thus highly gratifying to announce and introduce the completed Standard Treatment Guidelines and Essential Drugs List for hospital care. This is an important milestone in pursuance of the objectives of the NDP and Essential Drugs Programme. These documents are neither restrictive nor prescriptive. They are enabling and facilitative and set a firm basis towards the attainment of equity in health care, developing rational use by all prescribers and patients, cultivating all inclusive accountability and cost consciousness.

The National Essential Drugs List Committee and its expert subcommittees consulted widely, thus ensuring participation and ownership by health care providers, users of health services and those involved in human resource development.

On behalf of all health authorities, many thanks are to be accorded to all the contributors and others who worked so hard to put together these magnificent guidelines.

The completed Standard Treatment Guidelines and Essential Drugs List are a commendable achievement to address the major health problems in South Africa and set the stage for ensuring equity in health care delivery, as well as providing for rational prescribing and dispensing.

DR NKOSAZANA C DLAMINI-ZUMA
MINISTER OF HEALTH

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The Standard Treatment Guidelines and Essential Drugs List for Adults at Hospital level, which appear in this book, have been compiled after a lengthy consultative process. They include material from many sources and recommendations and advice from numerous individuals and groups. The groups included professional societies and organisations, expert committees, medical schools and secondary and tertiary hospitals.

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INTRODUCTION

The current members of the National Essential Drugs List Committee for Hospitals was established by Dr Nkosazana C Dlamini-Zuma Minister of Health on 1 April 1996, at the time that the first EDL/Standard Treatment Guidelines for Primary Health Care was published. A wide consultation process was followed through different stages, viz. a compiled list of common health problems and several drafts of guidelines and related essential drugs for paediatric and adult conditions. There are several individual and group contributions, especially from the academic centres. The documents presented have therefore enjoyed majority participation.

The concept of an essential drugs list is a cornerstone of the National Drug Policy and an essential step in the transformation of the health care delivery system in South Africa.

The process of compiling treatment guidelines and essential drugs lists is ongoing, and frequent updates will be necessary, involving, *inter alia*, indigenous research groups and the regulatory authority's advice, certified good manufacturing practice and quality assurance. The document presented is thus the beginning of a continuous process.

These initial products cover common health problems and drugs lists at secondary and tertiary hospital level. There were problem areas, where "common conditions" arise by concentration and are complicated, problematic, essentially rare, expensive to diagnose and to treat and require complicated procedures. Such conditions, e.g. onco-therapy, dialysis, transplantation, and HIV/AIDS, require special mention and attention at a different level. A next stage would be to consider the appointment of panels of experts, guided by health authority policies, to develop protocols, covering all aspects, including cost implications, palliation, treatment, prognosis, selection criteria and mechanisms of funding.

Hopefully the completed initial step will facilitate the development of rational prescribing and dispensing, eliminate wastage, encourage research and critical evaluation and facilitate equity in health care.

The health care professionals who have contributed have done a sterling job.

Thank you.

PROFESSOR K P MOKHOB
CHAIRPERSON

THE ESSENTIAL DRUGS CONCEPT

Effective health care requires a judicious balance of preventive and curative services. A crucial and often deficient element in curative services is an adequate supply of appropriate medicines. The government of South Africa clearly outlines its commitment to ensuring availability and accessibility of medicines for all people in the health objectives of the National Drug Policy which are as follows:

- to ensure the availability and accessibility of essential drugs to all citizens;
- to ensure the safety, efficacy and quality of drugs
- to ensure good prescribing and dispensing practice;
- to promote the rational use of drugs by prescribers, dispensers and patients through provision of the necessary training, education and information;
- to promote the concept of individual responsibility for health, preventive care and informed decision making.

Achieving these objectives requires a comprehensive strategy that not only includes improved supply and distribution, but also appropriate and extensive human resource development. The implementation of an Essential Drugs Programme (EDP) forms an integral part of this strategy, with rationalisation of the wide variety of medicines available in the public sector as a first priority. The private sector is encouraged to use these guidelines and the drug list wherever appropriate.

The working principles used by the National Essential Drugs List (EDL) Committee to draft the EDL/STG's for secondary and tertiary hospital care were:

- conditions to be included are those which comprise the majority of common health problems at secondary and tertiary hospital level. Prevalence and severity were factors also considered
- treatment will follow recommended standard treatment guidelines, which will specify both treatment and referral details
- drug legislation will reflect and facilitate practice

The **criteria** for the selection of essential drugs for secondary and tertiary hospital care in South Africa were based on the WHO guidelines for drawing up a national EDL. They include the following points:

- any drug included must meet the needs of the majority of the population
- sufficient proven scientific data regarding effectiveness must be available
- any drug included in the EDL should have a substantial safety and risk/benefit ratio
- all products must be of an acceptable quality, and must be tested on a continuous basis
- the aim, as a rule, is to include only products containing single pharmacologically active ingredients
- combination products, as an exception, will be included where patient compliance becomes an important factor, or two pharmacologically active ingredients are synergistically active in a product
- products will be listed according to their generic names only
- where drugs are clinically equally effective, the drugs will be compared on the following factors:
 - the best cost advantage
 - the best researched
 - the best pharmacokinetic properties
 - the best patient compliance
 - the most reliable local manufacturer
- a request for a new product to be included on the EDL must be supported by scientific evidence-based data and appropriate references on its advantages and benefits over an existing product.

Essential drugs are those that satisfy the needs of the majority of the population.
They should therefore be available at all times, in adequate amounts, and
in the appropriate dosage forms

HOW TO USE THIS BOOK (ADULT GUIDELINES)

The book comprises of secondary and tertiary hospital level guidelines which have been made compatible with Primary Health Care guidelines.

Standard Treatment Guidelines apply to the “average” patient. They are not rigid rules and the prescriber should consult more detailed texts and adapt management as necessary when there are special circumstances. Likewise, while due care has been taken to check all dosages, the prescriber still has to accept the final responsibility.

It is assumed that users of the book will have the specific expertise of medical practitioners with variable access to specialists/consultants. Therefore, when referral is advised, it is intended to imply the participation of a specialist or if necessary, the transfer to a healthcare facility with the needed resources for further investigation and management. The level for referral could vary according to the resources available.

Likewise, when a category of prescriber is stated, it has been done to restrict the use of particular medicines either for cost or safety reasons.

The book is set out in systems in which component topics are in alphabetical order. Each guideline outlines important non-drug management and then sets out the recommended drugs and dosages.

Drugs are listed at the back of the book with appropriate formulations for appropriate prescribing.

Procedures such as peritoneal dialysis are not described and information would have to be accessed separately.

A motivation form to amend the EDL or STG is included and should be accompanied by references and evidence based information to support any change. Your assistance would be welcomed and appreciated.

A section on notifiable conditions and the procedure to be followed for notification is included.

Essential drugs lists and Standard Treatment Guidelines require regular revision and the input of users is of major value and importance.

MOTIVATION TO AMEND THE NATIONAL ESSENTIAL DRUGS LIST/STANDARD TREATMENT GUIDELINES

PLEASE INDICATE THE NATURE OF SUBMISSION BY MARKING THE APPROPRIATE BOX:

Deletion of a listed drug. (Please attach proven evidence of the harmful/useless effects of the drug.)

Addition of a new disease. (Please attach epidemiological evidence proving prevalence and a proposed treatment guideline)

Addition of a new drug. (Please attach evidence of the proven benefits of this drug.)

Replacement of a listed drug. (Please attach evidence of the proven benefits of such a replacement over the existing drug.)

Name of drug (INN)/generic: _____

Dosage form and strength: _____

Therapeutic class: _____

Reason for amendment: _____

References: _____

Advantages over existing drug(s) in the same therapeutic class: _____

Proposed treatment guideline: (attach guideline if necessary): _____

Submitted by: _____

Address: _____

Contact person: _____

Telephone number: _____

Signature: _____

Date: _____

Please send to:

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Department of Health
Private Bag X828
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For attention:

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1. Alimentary tract

1.1 Gastrointestinal disorders

COLITIS, ULCERATIVE (UC)

Treatment guidelines

Management		Comments
Non-drug treatment	<p>Correct electrolyte, haematinic and nutritional deficiencies. Fully explain the disease to the patient and relatives. Milk avoidance may benefit some patients.</p> <p>NB. Surveillance colonoscopy is required every 1–2 years in chronic UC. (More than 10 years duration)</p>	<p>Referral criteria</p> <ul style="list-style-type: none"> • Fulminant colitis with more than 8 bloody diarrhoeal stools per day needs hospital admission and close monitoring as immediate surgery may be required. • Toxic megacolon requires hospital admission, parenteral fluids, corticosteroids, antibiotics and nasogastric suction. • Urgent colectomy may be required to prevent perforation. • Perforation of the colon requires urgent surgery.
Drug treatment	<p>Mild cases: Loperamide, oral, 2–4 mg after each loose stool (maximum 16 mg/day) PLUS Sulfasalazine, oral, 500 mg twice daily, up to 1500 mg 3 times daily. However, 1–2 g 4–6 times daily may be given for acute attacks for 3 weeks.</p> <p>Severe cases: ADD Prednisone, oral, 20–40 mg daily, tapered to lowest possible maintenance dose OR Prednisolone sodium phosphate retention enemas, 20 mg/100 mL twice daily.</p>	<p>5-amino-salicylic acid preparations (e.g. olsalazine, mesalazine) should be used only in patients intolerant to sulfasalazine. These patients should be referred for initiation of treatment with these drugs.</p> <p>To be prescribed by a gastroenterologist only</p>

Continued:

Treatment guidelines:- COLITIS, ULCERATIVE (UC) (continued from previous page)

Management		Comments
Very severe cases:	May require above therapy PLUS Azathioprine, oral, 1–2 mg/kg daily OR Methotrexate	Emergency management (specialist facility) will include resuscitation with parenteral fluids, blood transfusions, corticosteroids, antibiotics and nasogastric suction as indicated To be prescribed by a gastroenterologist only.

CONSTIPATION AND FAECAL IMPACTION

Treatment guidelines

Management		Comments
Non-drug treatment	Treat underlying disease if possible. Physical exercise to be encouraged. Dietary measures. Increase bran intake. Increase fluid intake (at least 1 L/day) Manual removal of impacted stools	Referral criteria <ul style="list-style-type: none"> • Faecal impaction. Manual removal initially required. • Investigation for organic disease
Drug treatment	Enemata, any suitable type, e.g. phosphate, 135 mL once. Can be repeated as required. The following sequence of drugs is recommended: Sennosides A and B (equivalent to 7.5 mg), oral, 15mg at night 2–3 times a week as necessary. OR Glycerine suppository, insert one rectally once daily as required OR Phosphate enema, 135 ml once and can be repeated OR Liquid paraffin, orally, 30-60 ml once and can be repeated	Plain water enema is best. Enemata are not for continued use. Drug treatment is permitted when obstruction, malignancies and other causes have been excluded. Not for more than 4 weeks of treatment at a time Maximum 2 weeks For symptomatic relief. Maximum: 2 weeks, if used frequently Maximum 2 weeks, if used frequently

CROHN'S DISEASE

Treatment guidelines

Management		Comments
Non-drug treatment	<p>Patient education and general support. Long-term specialist follow up is required. Low residue foods in patients with strictures. Total parenteral nutrition may be needed for management of strictures or obstruction.</p>	<p>Referral criteria</p> <ul style="list-style-type: none"> • Complications such as complete, or partial obstruction, malabsorption, perforation with local abscesses or fistulae; anal fissure, bleeding, toxic megacolon, systemic manifestations. <p>Surgery may be needed for abscesses, fistulae and strictures causing obstruction. Resection should be as conservative as possible because of the relapsing nature of the disease.</p>
<p>Drug treatment</p> <p>Diarrhoea:</p> <p>Mild cases :</p>	<p>Loperamide, oral, 2–4 mg 4 times daily as required for diarrhoea OR Codeine phosphate, oral, 30–60 mg 3 times daily may often relieve the diarrhoea.</p> <p>Specific treatments: as for ulcerative colitis</p> <p>Loperamide, oral, 2–4 mg after each loose stool (maximum 16 mg/day) PLUS Sulfasalazine, oral, 500 mg twice daily, up to 1500 mg 3 times daily. However, 1–2 g 4–6 times daily may be given for acute attacks for 3 weeks.</p>	<p>Specific treatment is really only effective in acute active disease.</p> <p>Correct vitamin and mineral deficiencies.</p> <p>5-amino-salicylic acid preparations (e.g. olsalazine, mesalazine) should be used only in patients intolerant to sulfasalazine. These patients should be referred for initiation of treatment with these drugs.</p>

Continued:

Treatment guidelines:- CROHN'S DISEASE (continued from previous page)

Management		Comments
Severe disease:	<p>ADD Prednisone, oral, 20–40 mg daily, tapered to lowest possible maintenance dose</p> <p>OR</p> <p>Prednisolone sodium phosphate retention enemas 20 mg/100 mL twice daily</p>	<p>Corticosteroids are only of value in active disease</p> <p>To be prescribed by a gastroenterologist only</p>
Very severe disease:	<p>May require above therapy</p> <p>PLUS</p> <p>Azathioprine, oral, 1–2 mg/kg daily</p> <p>OR</p> <p>Methotrexate, oral, 7.5 mg weekly</p>	<p>Emergency management (specialist facility) will include resuscitation with parenteral fluids, blood transfusions, corticosteroids, antibiotics and nasogastric suction as indicated</p> <p>Both azathioprine and methotrexate to be prescribed by a gastroenterologist only.</p>
Perianal disease:	Metronidazole, oral, 400 mg twice daily	

CYSTIC FIBROSIS

Treatment guidelines

Management		Comments
Non-drug treatment	<p>Premarital: Gene typing and counselling. Counselling of parents, CF support groups, etc. Adequate hydration and electrolyte replacement, especially in warm weather. Early treatment of infections. Active chest physiotherapy (Frequent postural drainage) Diet: High protein, high calorie, low fat diet.</p>	<p>Referral criteria</p> <ul style="list-style-type: none"> • To confirm the diagnosis and screen relatives • Complications • Malnutrition and deficiencies • To plan management <p>Haemoptysis may be severe and may need pulmonary artery embolisation. Pneumothorax may need tube drainage and if recurrent, pleurodesis or pleurectomy. Cor pulmonale may need appropriate treatment. Obstructive GIT complications need surgical correction.</p>
Drug treatment	<p>Pancreatic enzymes as a combination capsule containing amylase, lipase and protease. Dose according to response.</p>	<p>Treat each feature according to its severity. To be prescribed by a specialist only Vitamin supplements to be given.</p>
Respiratory tract infections – prophylaxis:	<p>Flucloxacillin, oral, 250 mg 8 hourly as a low dose for prophylaxis against staphylococcal infections, long-term.</p>	<p>Advocated by some practitioners</p>

Continued:

Treatment guidelines: CYSTIC FIBROSIS (continued from previous page)

Management		Comments
Established infections: First line antibiotics <i>S. aureus</i> :	Cloxacillin, IV, 500 mg 6 hourly OR Flucloxacillin, oral, 500 mg 6 hourly PLUS Sodium fusidate, IV or oral, 500 mg 8 hourly. Antibiotics should be continued for 2 weeks after the infection has cleared.	Antibiotic treatment is needed for a minimum of two weeks, the duration being related to clinical and bacteriological response. Antibiotic treatment should be continued for 10–14 days after the clinical manifestations have subsided. Patients need to be followed up at short intervals, after an acute infection has cleared, to ensure successful outcome.
<i>Pseudomonas</i> species:	Ceftazidime IV, 2 g 8 hourly in three divided doses PLUS Tobramycin, IV, 5–8 mg/kg/day in two divided doses, with dose adjustment according to blood levels and renal function. OR Amikacin IV, 15 mg/kg/day 1 single dose or in 2 divided doses, 12 hourly	

Continued:

Treatment guidelines: CYSTIC FIBROSIS (continued from previous page)

Management		Comments
Second line antibiotics (Proven resistance of <i>Pseudomonas</i> to first line antibiotics):	Piperacillin, IV, 300 mg/kg/day in 3 divided doses (8 hourly) OR Imipenem-cilastatin, IV, 40–60 mg/kg/day divided in 8 hourly doses OR Ciprofloxacin, oral, 750 mg twice daily OR Ciprofloxacin, IV, 5–10 mg/kg/day, divided in 2 doses, 12 hours apart	
Proven resistance of <i>S. aureus</i> to the above:	Vancomycin, IV, 40 mg/kg/day (max 2000 mg/day) in 4 divided doses, 6 hourly	

INFECTIVE DIARRHOEA AND FOOD POISONING - N.B. Food poisoning is a notifiable disease

1. NON-INVASIVE BACTERIAL INFECTIONS

Treatment guidelines

Organism	Management	Comments
<i>Staphylococcus aureus</i>	Replace electrolytes and fluids Treat vomiting symptomatically	Outbreaks occur in institutions. Antibiotics are of no value Diagnosis Food culture
<i>E.coli</i> heat labile type toxin	Symptomatic	Antibiotics are of no value Diagnosis Food culture
<i>Staphylococcus</i> type toxin	Symptomatic	Antibiotics are of no value Diagnosis Food culture
<i>Clostridium perfringens</i>	Symptomatic IV fluids may be needed. Codeine phosphate, oral, 30–60 mg 3 times daily for 24 hours, for severe cramps.	Micro-epidemics occur with people eating from the same food. Antibiotics are of no value Diagnosis Toxin assay in food

Continued:

Treatment guidelines:- INFECTIVE DIARRHOEA AND FOOD POISONING; NON_INVASIVE BACTERIAL INFECTIONS (continued from previous page)

Organism	Management	Comments
<i>Clostridium botulinum</i>	Ventilatory support Trivalent (A, B, E), horse antitoxin. Beware of aspiration	Variable course, may be hyperacute. Differential diagnosis: Guillain-Barré syndrome, bulbar infarct, myasthenia gravis, belladonna poisoning. Diagnosis Toxin injection in mouse. Culture of food.
<i>E. coli</i> (ETEC) <i>Enterotoxigenic E. coli</i>	Trimethoprim/sulfamethoxazole (80/400), oral, 2 tablets twice daily OR Doxycycline, oral, 100 mg twice daily for 5 days. Loperamide, oral, 4 mg immediately, followed by 2 mg after each loose stool, up to 16 mg/day for severe diarrhoea.	Similar picture caused by <i>Klebsiella</i> , <i>Enterobacter</i> strains. Usually self-limiting Diagnosis Difficult - Heat labile toxin/ heat stable toxin in stools
<i>Vibrio cholerae</i> Cholera	Rapid IV fluid replacement 50–100 mL/min (several litres initially, e.g. Ringer-Lactate) until shock is reversed, thereafter according to fluid loss. PLUS Potassium chloride, 20–40 mmol/L as required. Oral rehydration in milder cases, and also when shock improves. Doxycycline, oral, 100 mg twice daily for 3 days OR Trimethoprim/sulfamethoxazole 160/800 mg twice daily for resistant organisms for 5 days	N.B. Cholera is a notifiable disease Onset is abrupt, with massive watery diarrhoea, usually painless, (several litres in a few hours), with hypovolaemia, shock, muscle cramps, cyanosis, metabolic acidosis and hypoglycaemia with convulsions It may be fatal in hours. Diagnosis Clinical picture in epidemics. Direct examination of stools (agglutination test, by dark field examination). Stool culture with specific agglutination test

INFECTIVE DIARRHOEA AND FOOD POISONING

2. INVASIVE BACTERIAL INFECTIONS

Treatment guidelines

Organism	Management	Comments
Shigella S. <i>dysenteriae</i> (A), S. <i>flexneri</i> (B), S. <i>boydii</i> (C)	Symptomatic, fluid and electrolyte replacement. Antibiotics according to sensitivity. WHO recommends: Nalidixic acid, oral, 1 g 6 hourly for 7 days OR Ampicillin, IV, 500 mg 6 hourly OR Amoxicillin, oral, 500 mg 8 hourly for 5 days OR Trimethoprim/sulfamethoxazole (80/400), oral, 2 tablets twice daily for 5 days.	Widespread resistance to antibiotics is common. Appropriate antibiotics must be selected according to sensitivity. Diagnosis Stool and blood culture. Culture pus of distal sites.
<i>Salmonella typhi</i> Typhoid fever	Chloramphenicol, oral, 500 mg, 6 hourly for 14 days. Resistant cases: Ciprofloxacin, oral, 500 mg twice daily, or IV, 200 mg twice daily OR Ceftriaxone, IV, 2 g/day in divided doses for 10–14 days	N.B. Typhoid fever is a notifiable disease Drug of choice: Chloramphenicol Diagnosis Serology (Widal) rising 0 titres, blood culture. Leucopenia early, later leucocytosis, DIC

Continued:

Treatment guidelines:- INFECTIVE DIARRHOEA AND FOOD POISONING; INVASIVE BACTERIAL INFECTIONS (continued from previous page)

Organism	Management	Comments
<i>Salmonella</i> (other) <i>S. enteritidis</i> <i>S. typhimurium</i> , <i>S. choleraesuis</i>	Supportive, nil per mouth for 8–12 hours. Antibiotics prolong disease. However, if severe: Chloramphenicol, oral, 500 mg, 6 hourly OR Trimethoprim/sulfamethoxazole (80/400), oral, 2 tablets twice daily OR Doxycycline, oral, 100 mg twice daily, for at least two weeks.	Diagnosis Stool culture
<i>Campylobacter jejuni</i>	Erythromycin stearate, oral, 250–500 mg 8 hourly, may shorten the course of infection	Diagnosis Stool culture
<i>Yersinia enterocolitica</i>	Severe infections: Ampicillin, IV, 500 mg 6 hourly OR Amoxicillin, oral, 500 mg 8 hourly for 5 days OR Doxycycline, oral, 100 mg twice daily OR Chloramphenicol, oral, 500 mg, 6 hourly	Gastroenteritis is self-limiting. Diagnosis Stool culture
<i>Y. pseudotuberculosis</i>	Severe infections: Ampicillin, IV, 500 mg 6 hourly OR Doxycycline, oral, 100 mg twice daily OR Amoxicillin, oral, 500 mg 8 hourly for 5 days OR Chloramphenicol, oral, 500 mg, 6 hourly	Gastroenteritis is self-limiting. Diagnosis Blood or stool culture, serology, histology on biopsy.

INFECTIVE DIARRHOEA AND FOOD POISONING

3. VIRAL AND PROTOZOAL INFECTIONS

Treatment guidelines

Organism	Management	Comments
VIRUS Rotavirus Norwalk virus Enteroviruses Adenoviruses	Symptomatic as it is self-limiting. Fluid replacement when needed Norwalk - No treatment.	Diagnosis Culture of secretions
<i>Gardia lamblia</i>	Metronidazole, oral, 400 mg 8 hourly for 7 days	Diagnosis Cysts in stools. Immuno-fluorescence of duodenal aspirate or biopsy.
<i>Entamoeba histolytica</i>	Metronidazole, oral, 400 mg 8 hourly for 10 days cures luminal and invasive forms	Diagnosis Erythrocytes filled with trophozoites in fresh stools or mucosa. Cysts alone are not diagnostic.

GIARDIASIS

Treatment guidelines

Management		Comments
Non-drug treatment	Fluid and electrolyte replacement in severe diarrhoea.	<p>Definition Infection with the protozoan parasite, <i>Giardia lamblia</i> which colonises the proximal small intestine.</p> <p>Pathogenesis probably involves physical damage by the parasites and by their products as well as disturbances in bacterial populations, and interference with bile salts and pancreatic enzymes.</p>
Drug treatment	Metronidazole, oral, 400 mg 8 hourly for 7 days.	

HIATUS HERNIA

Treatment guidelines

Management		Comments
Non-drug treatment	<p>A symptomatic sliding hernia is managed as reflux oesophagitis i.e. Eliminate food and agents that reduce LOS function, such as fatty foods, spicy foods, grilled foods, chocolate, alcohol, tea and coffee, smoking, medicines such as NSAIDs, anticholinergics, antidepressants and smooth muscle relaxants</p> <p>Weight reduction.</p> <p>Elevate head end of bed 10–15 cm.</p> <p>Avoid supine position for 3–4 hours after a meal.</p> <p>Surgical treatment: Indicated when other measures and pharmacological treatment fail. A rolling hernia with obstructive symptoms requires surgery.</p>	
Drug treatment	<p>None, unless a peptic ulcer has developed.</p> <p>Peptic Ulcer: No risk factors and diagnosis unconfirmed:</p> <p>Magnesium trisilicate/aluminium hydroxide 500/250 mg, oral, 1–2 tablets to be chewed 1 hour before and 3 hours after meals and at night for 4 weeks.</p> <p>OR</p> <p>Cimetidine, oral, 800 mg at night for 4 weeks</p>	
Endoscopy confirmed, <i>H. pylori</i> associated, duodenal ulceration:	<p>Proton pump inhibitor in the morning for 7 days only, e.g. Omeprazole, oral, 20 mg daily</p> <p>PLUS</p> <p>Amoxicillin, oral, 1g twice daily</p> <p>PLUS</p> <p>Metronidazole, oral, 400 mg twice daily, for one week.</p>	To be prescribed by a gastroenterologist only
Gastric ulcer:	Proton pump inhibitor for 4 weeks, otherwise as above for duodenal ulcer, repeat endoscopy at 4 weeks.	
Endoscopically confirmed, <i>H. pylori</i> non-associated:	Cimetidine, oral, 800 mg at night for 4 weeks.	

IRRITABLE BOWEL SYNDROME (IBS)

(Synonyms: spastic colon, irritable colon)

Treatment guidelines

Management		Comments
Non-drug treatment	<p>This is the primary form of treatment.</p> <p>Reassure patient that there is no serious organic disorder (after investigation).</p> <p>Explain that the symptoms are due to spasm of the bowel or an increased awareness of normal bowel activity.</p> <p>Dietary factors identified by the patient should be avoided.</p> <p>High fibre (bran) diets may be tried for patients with constipation (warn about temporary increased flatus and abdominal distension).</p>	Refer if organic disease cannot be excluded.
Drug treatment	<p>Not specifically indicated.</p> <p>Short-term symptomatic, for diarrhoea and constipation, see appropriate sections.</p>	