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DHA TELEHEALTH CLINICAL GUIDELINES

FOR VIRTUAL MANAGEMENT

OF GASTROENTERITIS IN ADULTS – 41

Version 2

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Health Policies and Standards Department

Health Regulation Sector (2024)

INTRODUCTION

Health Regulation Sector (HRS) forms an integral part of Dubai Health Authority (DHA) and is mandated by DHA Law No. (14) of the year (2021) amending some clauses of law No. (6) of 2018 pertaining to the Dubai Health Authority (DHA), to undertake several functions including but not limited to:

- Developing regulation, policy, standards, guidelines to improve quality and patient safety and promote the growth and development of the health sector;
- Licensure and inspection of health facilities as well as healthcare professionals and ensuring compliance to best practice;
- Managing patient complaints and assuring patient and physician rights are upheld;
- Governing the use of narcotics, controlled and semi-controlled medications;
- Strengthening health tourism and assuring ongoing growth; and
- Assuring management of health informatics, e-health and promoting innovation.

The DHA Telehealth Clinical Guidelines aim to fulfil the following overarching DHA Strategic Priorities (2026):

- Pioneering Human-centered health system to promote trust, safety, quality and care for patients and their families.
- Make Dubai a lighthouse for healthcare governance, integration and regulation.

- Leading global efforts to combat epidemics and infectious diseases and prepare for disasters.
- Pioneering prevention efforts against non-communicable diseases.
- Become a global digital health hub.
- Foster healthcare education, research and innovation.

ACKNOWLEDGMENT

The Health Policy and Standards Department (HPSD) developed this Guideline in collaboration with Subject Matter Experts and would like to acknowledge and thank these health professionals for their dedication toward improving quality and safety of healthcare services in the Emirate of Dubai.

Health Regulation Sector

Dubai Health Authority

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EXECUTIVE SUMMARY

Telehealth is based on Evidence Based Practice (EBP) which is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient. It means integrating individual clinical expertise with the best available external clinical evidence and guidelines from systematic research.

EBP is important because it aims to provide the most effective care virtually, with the aim of improving patient outcomes. As health professionals, part of providing a professional service is ensuring that practice is informed by the best available evidence.

Acute viral gastroenteritis is a common cause of illness resulting in Teleconsultations and/or visits to the emergency departments and out-patient clinics and. Acute viral gastroenteritis causes outbreaks in certain closed communities, such as nursing homes, schools, and cruise ships. Restaurant and catered meals are another common source of outbreaks.

The primary purpose of this Telehealth Guideline is to prove the health physicians, who will be managing patients virtually, with a summary of the best available evidence for the virtual management of this very common condition among adults.

This guideline is presented in the format comprising of clinical history/symptoms, differential diagnosis, investigations and management. Identification of 'Red Flags' or serious conditions associated with the condition is an essential part of this telehealth guideline as it aids the physician to manage patients safely and appropriately by referrals, if indicated during virtual telehealth assessment, to ER, family physicians or specialists for a face to face management.

DEFINITIONS/ABBREVIATIONS

Virtual Clinical Assessment: Is the evaluation of the patient's medical condition virtually via telephone or video call consultations, which may include one or more of the following: patient medical history, physical examination and diagnostic investigations.

Patient: The person who receives the healthcare services or the medical investigation or treatment provided by a DHA licensed healthcare professional.

ABBREVIATIONS

DHA	:	Dubai Health Authority
EBP	:	Evidence Based Practice
ER	:	Emergency Room
KPI	:	Key Performance Indicator

1. BACKGROUND

1.1. Introduction

1.1.1. Gastroenteritis is inflammation of the lining of the stomach and small and large intestines. Most cases are infectious, although gastroenteritis may occur after ingestion of drugs and chemical toxins (e.g., metals, plant substances). Acquisition may be foodborne, waterborne, or via person-to-person spread.

1.1.2. Symptoms include anorexia, nausea, vomiting, diarrhea, and abdominal discomfort. Diagnosis is clinical or by stool culture, although polymerase chain reaction testing and immunoassays are increasingly used. Treatment is symptomatic, although some parasitic and some bacterial infections require specific anti-infective therapy.

1.2. Etiology

1.2.1. Most cases of acute infectious gastroenteritis are viral, with norovirus being the most common cause of acute gastroenteritis and the second most common cause of hospitalization for acute gastroenteritis. The other common pathogens causing viral gastroenteritis are rotavirus, enteric adenovirus, and astrovirus.

1.2.2. In addition to large outbreaks from consumption of contaminated food and water, noroviruses are efficiently spread person-to-person. Viral gastroenteritis has pronounced peaks in the winter and spring.

2. SCOPE

2.1. Telehealth services in DHA licensed Health Facilities.

3. PURPOSE

3.1. To support the implementation of Telehealth services for patients with complaints of Gastroenteritis in Dubai Health Authority (DHA) licensed Health Facilities

4. APPLICABILITY

4.1. DHA licensed physicians and health facilities providing Telehealth services.

4.2. Exclusion for Telehealth services are as follows

4.2.1. Emergency cases where immediate intervention or referral is required.

4.2.2. Prescribe Narcotics, Controlled or Semi-Controlled medications.

5. RECOMMENDATION

5.1. Clinical Manifestations

5.1.1. History

a. Acute gastroenteritis is defined as diarrheal disease (3 or more times per day or at least 200 g of stool per day) of rapid onset that lasts less than 2 weeks and may be accompanied by nausea, vomiting, fever, or abdominal pain.

b. Both vomiting and diarrhea are usually present; however, either can occur alone. In one study, among patients who presented to the emergency department with acute gastroenteritis, the most common symptoms were Nausea (93%), Diarrhea (89%), Vomiting (81%) and Abdominal Pain (76%).

c. Respiratory symptoms were reported in approximately 10% of the subjects and included sore throat, cough, and rhinorrhea.

d. Characteristics of the history that suggest a viral etiology of acute gastroenteritis include: an intermediate incubation period (24 to 60 hours), a short infection duration (12 to 60 hours), and a high frequency of vomiting.

5.1.2. Virtual physical examination: Common findings on physical examination of patients with acute viral gastroenteritis include:

a. mild diffuse abdominal tenderness when patient asked to palpate his/her abdomen; the abdomen is soft, but there may be voluntary guarding.

b. Fever (38.3 to 38.9°C [101 to 102°F]) occurs in approximately one-half of patients.

c. While relatively uncommon, it is important to identify signs of moderate to severe dehydration. Signs and symptoms of dehydration/volume depletion can be summarized in the table below:

- Dry mouth
- Increase thirst
- Confusion and lethargy
- Dizziness and syncopy
- Fatigue and weakness
- Headache
- Palpitation
- Hypotension
- Decreased urine output, concentrated urine (deep yellow or amber color)

6. RED FLAGS

6.1. Shock suspected (e.g., cold/pale/clammy skin, too weak to stand, low BP, palpitation.

6.2. Severe volume depletion/dehydration (e.g., no urine > 12 hours, very dry mouth, very lightheaded or disoriented)

6.3. Intractable vomiting

6.4. Severe abdominal pain or marked localized pain - consider a surgical cause

6.5. Prolonged symptoms (more than 1 week)

6.6. Age 65 or older or very young children/infants.

6.7. Comorbidities (e.g., diabetes mellitus, immunocompromised)

6.8. Pregnancy

6.9. Recent antibiotic treatment or recent hospitalization and diarrhea present > 3 days

6.10. Nocturnal diarrhea.

6.11. Bloody, black, or tarry bowel movements

6.12. Refer to APPENDIX 1 for the diagnostic approach to patients with suspected nonviral infectious gastroenteritis.

7. INVESTIGATION/DIAGNOSIS

The diagnosis of acute viral gastroenteritis is made by a characteristic history of diarrheal disease (3 or more times per day or at least 200 g of stool per day) of rapid onset that lasts less than 1 week and may be accompanied by nausea, vomiting, fever, or abdominal pain with mild, diffuse, abdominal tenderness.

7.1. Laboratory findings

7.1.1. Routine laboratory and stool studies are not required for the diagnosis of acute viral gastroenteritis; it is not necessary to determine a specific viral diagnosis.

7.1.2. However, stool studies should be obtained in the following situations:

a. Adults presenting with persistent fever

b. Dehydration

c. Blood or pus in the stool

d. Alarm symptoms and signs

e. When there is clinical suspicion of a nonviral, inflammatory etiology of acute gastroenteritis.

f. Diarrhea that lasts for more than a week should also prompt consideration of infectious and noninfectious causes.

7.1.3. In the absence of signs of volume depletion, it is not necessary to measure serum electrolytes, which are usually normal. If substantial volume depletion is present, clinicians should measure serum electrolytes to screen for hypokalemia or renal dysfunction.

7.1.4. The complete blood count does not reliably distinguish between viral and bacterial gastroenteritis. The white blood cell count may or may not be elevated. In patients with acute viral gastroenteritis with volume depletion, the complete blood count may show signs of hemoconcentration.

8. DIFFERENTIAL DIAGNOSIS

8.1. Inflammatory bowel disease.

8.2. Bowel cancer

8.3. Irritable bowel syndrome

8.4. Constipation with overflow

8.5. Addison's disease

8.6. Thyrotoxicosis

8.7. Carcinoid

8.8. Gastritis

8.9. Surgical abdomen

8.10. *Giardia* and cryptosporidium, for those with diarrhea that lasts over a week in an individual with a history of travel, hiking, or oral-anal sexual activity

8.11. *Clostridioides* (formerly *Clostridium*) *difficile* infection in patient with recent antibiotic use or hospitalization

8.12. Causes of chronic diarrhea includes: colorectal cancer, irritable bowel syndrome, inflammatory bowel disease, microscopic colitis, malabsorption syndromes, post-cholecystectomy related diarrhea, medication-induced diarrhea, laxative abuse, and chronic infections.

8.13. Patients with acute viral gastroenteritis may also present with isolated vomiting without prominent diarrhea. Clinicians should consider adverse effects of medications and acute vestibular disorders in the differential diagnosis of these patients

9. MANAGEMENT/TREATMENT

9.1. Refer to APPENDIX 2 for the Virtual Management of Gastroenteritis in Adults Algorithm

9.2. Non-pharmacological treatment

9.2.1. Patient Education:

a. All patients must be extensively educated about the signs and symptoms of dehydration

b. Acute viral gastroenteritis is usually self-limited and is treated with supportive measures (fluid repletion and unrestricted nutrition). No specific antiviral agents are available.

9.2.2. Fluid maintenance and repletion

a. Patients should be educated on the importance and proper methods of oral rehydration and early appropriate feeding.

b. For adults presenting with acute viral gastroenteritis without signs of volume depletion or hypovolemia, adequate volume can be maintained with sport drinks, soups, broths and increased oral fluid. Soft drinks and fruit juices that are high in sugar content should be avoided.

c. For adults presenting with mild to moderate hypovolemia, oral rehydration solutions are advised along with hydration.

d. Patients with severe dehydration require intravenous fluids, therefore, should be referred promptly to ER.

9.2.3. Refer to APPENDIX 3 for table on Assessment and treatment of dehydration

9.2.4. Diet

a. In adults with acute viral gastroenteritis, it is not recommended an adherence to any restricted diet. Patients should be encouraged to eat as tolerated. Smaller meals may be less likely to induce vomiting than larger ones. Bland, low-residue foods may also be better tolerated than others.

b. Broiled starches/cereals (potatoes, noodles, rice, wheat, and oat) with some salt are excellent foods to consider. In addition, crackers, bananas, yogurt, soups, and boiled vegetables can also be consumed.

c. While the BRAT diet (bananas, rice, applesauce, and toast) is often recommended, the evidence to support it is weak. Similarly, while many physicians advise patients to exclude milk and dairy products from their diet during the episode of diarrhea and for several weeks after symptoms resolve, the evidence to support this is also weak.

9.3. Pharmacological Treatment:

9.3.1. Probiotics

a. The value of oral probiotics in acute viral gastroenteritis is not well established, and further research is needed to determine the optimal type, dose, and regimen of probiotics before they are recommended for routine use.

b. Probiotics may modulate the immune response through interaction with the gut-associated immune system or through direct effect on other microorganisms.

9.3.2. Pharmacotherapy

a. In general, viral gastroenteritis is an acute and self-limited disease that does not require pharmacologic therapy. It is important to remember that adequate fluid repletion is the mainstay of treatment of acute viral gastroenteritis and that any pharmacologic agents are to be used as adjuncts.

b. When indicated for viral gastroenteritis, an antimotility agent may be added to decrease fluid losses; however, these agents may mask the amount of fluid lost, since fluid may pool in the intestine. When indicated, an antiemetic may be used to allow adequate oral rehydration.

9.3.3. Antimotility agents

a. Specific symptomatic therapies for adults with acute viral gastroenteritis with moderate to severe non-bloody diarrhea or signs or symptoms of volume depletion who do not have a fever higher than low.

b. In some types of non-viral diarrheal illness, the use of antimotility agents could be harmful. However, antimotility drugs are not recommended for acute diarrhea in young children.

c. Example of antimotility agent for symptomatic treatment of acute diarrhoea include: Loperamide hydrochloride.

d. According to BNF, oral dosage of Loperamide for adult is Initially 4 mg, followed by 2 mg for up to 5 days, dose to be taken after each loose stool; usual dose 6–8 mg daily; maximum 16 mg per day.

e. It is advised to avoid antimotility agents in patients with clinical features suggestive of dysentery (fever, bloody or mucoid stools) unless antibiotics are also given because of concerns that antimotility agents can prolong disease in such infections or lead to more severe illness.

9.3.4. Antiemetics

a. Although studies in adult populations are lacking, for patients who cannot tolerate oral rehydration due to excessive vomiting, it can be suggested treating with an antiemetic for one to two days to facilitate oral fluid repletion. Examples of antiemetics include”

b. Domperidone: Adult (body-weight 35 kg and above): 10 mg up to 3 times a day; maximum 30 mg per day

c. Metoclopramide hydrochloride

- Adult (body-weight up to 60 kg): Up to 500 micrograms/kg daily in 3 divided doses,
- Adult (body-weight 60 kg and above): 10 mg up to 3 times a day.

9.3.5. Antibiotics

a. In adults who clearly have acute viral gastroenteritis (e.g., outbreak with known etiology), it is not recommended the empiric use of antibiotics.

b. However, for select patients with more symptomatic disease or with risk for more severe disease, empiric antibiotic treatment is appropriate, as symptom reduction may have a greater relative benefit in such patients. Often, empiric antibiotics are used in the following circumstances:

- Severe disease (fever, more than 6 stools per day, volume depletion warranting hospitalization)
- Features suggestive of invasive bacterial infection, such as bloody or mucoid stools (except in cases of nonsevere disease when fever is low or absent)

- Host factors that increase the risk for complications, including age >70 years old and comorbidities such as cardiac disease and immunocompromising conditions

c. If patients fall in the above categories, then a referral to face to face consultation should be made for further assessment.

10. REFERRAL CRITERIA

10.1. Refer to Emergency Department

10.1.1. Shock suspected (e.g., cold/pale/clammy skin, too weak to stand, low BP, rapid pulse)

10.1.2. Severe volume depletion/dehydration (e.g., no urine > 12 hours, very dry mouth, very lightheaded or disoriented)

10.1.3. Intractable vomiting

10.1.4. Excessive bloody stool or rectal bleeding

10.1.5. Severe abdominal pain

10.1.6. Age 65 or older with signs of hypovolemia

10.1.7. Pregnancy

10.1.8. Marked localized or severe abdominal pain - consider a surgical cause

10.1.9. Recent antibiotic treatment or recent hospitalization and diarrhea present > 3 days

10.1.10. Bloody, black, or tarry bowel movements

10.2. Referral to Specialists or Family Medicine Physicians

10.2.1. Pregnancy

10.2.2. Prolonged symptoms (more than one week)

10.2.3. No improve after seven days of virtual management or symptoms worsen

10.2.4. Abnormal electrolytes or renal function

10.2.5. Comorbidities (e.g., diabetes mellitus, immunocompromised)

10.2.6. Very young children/infants.

10.2.7. Nocturnal diarrhea.

11. PROGNOSIS/COMPLICATIONS

11.1. Acute viral gastroenteritis is usually transient and self-limited with an excellent prognosis. In developed countries, hospital admission for acute gastroenteritis is uncommon but necessary when severe dehydration is present. Older frail adults are also more susceptible to dehydration and subsequent complications (e.g., syncope, hypotension).

11.2. Persons with medical comorbidities, such as immunodeficiency, inflammatory bowel disease, valvular heart disease, diabetes mellitus, renal impairment, rheumatoid arthritis, and systemic lupus erythematosus, as well as patients taking immunosuppressants, systemic corticosteroids, or diuretics, are more vulnerable and at risk for complications and poor outcomes. These patients require closer

follow-up and a lower threshold for hospitalization or further evaluation if the gastroenteritis is not resolving.

12. PREVENTION

12.1. Prevention occurs at both the individual and community level. The best preventive measure that individuals can take is adequate hand hygiene and avoidance of close contact, if possible, with people with symptoms of gastroenteritis. Individuals with acute gastroenteritis should be counseled about diligent hand hygiene to help prevent spread of infection to their family, colleagues, and contacts.

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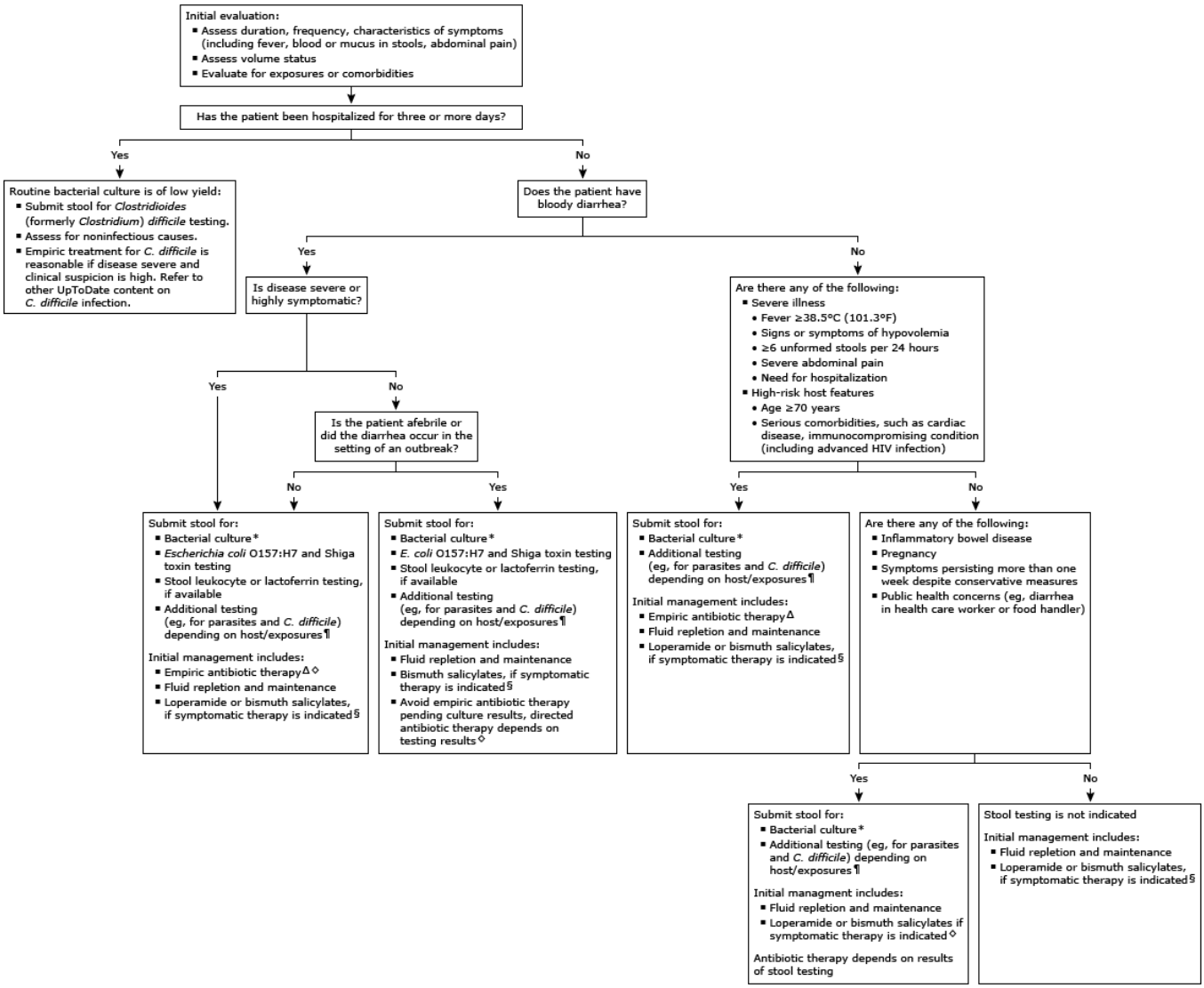
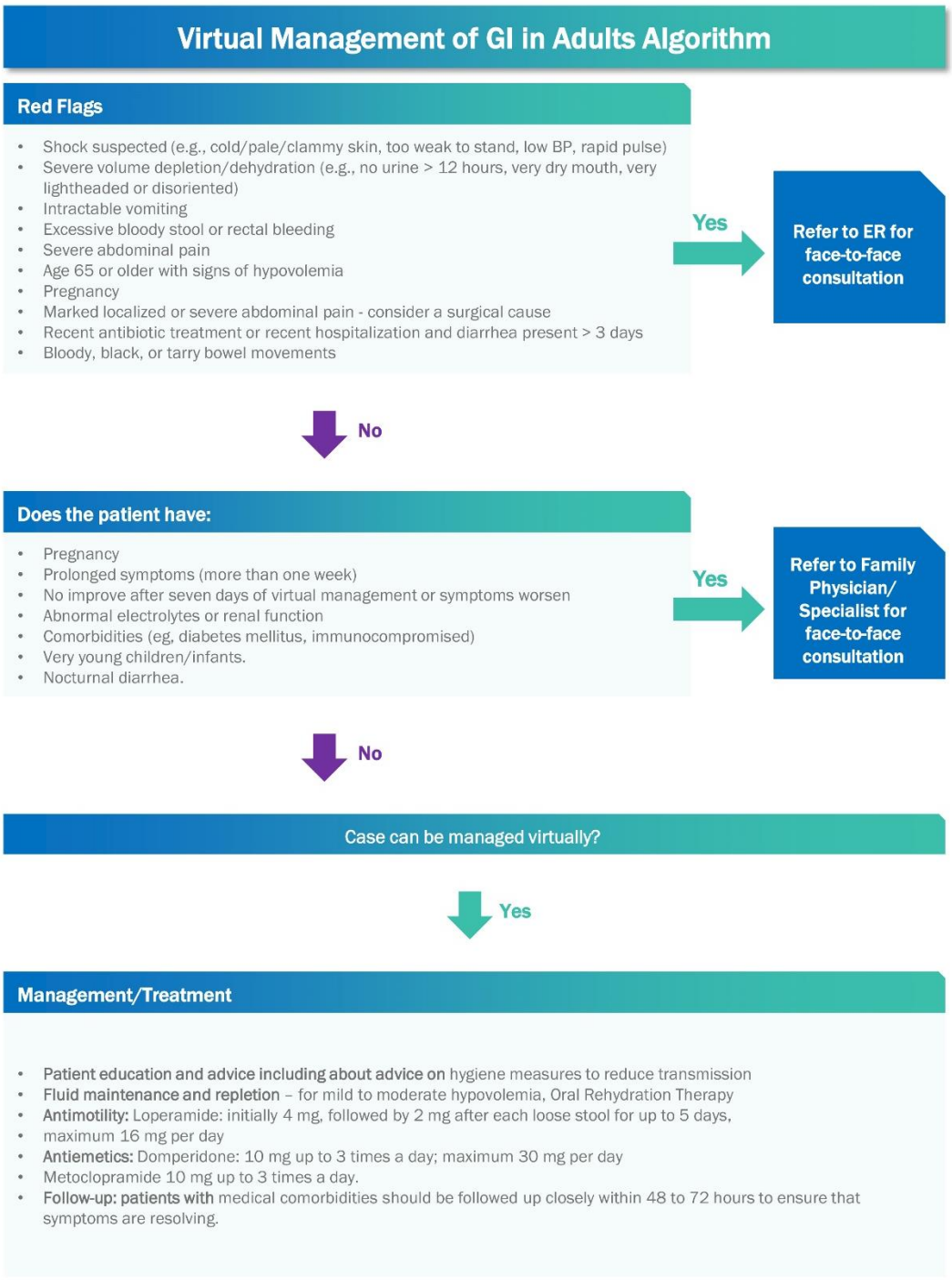
APPENDICES

APPENDIX 1 - THE DIAGNOSTIC APPROACH TO PATIENTS WITH SUSPECTED NONVIRAL INFECTIOUS GASTROENTERITIS



APPENDIX 2 – VIRTUAL MANAGEMENT OF GI IN ADULTS ALGORITHM



APPENDIX 3 – ASSESSMENT AND TREATMENT OF DEHYDRATION