

[HOSPITAL / HEALTH AUTHORITY NAME]

ACUTE VOMITING, DIARRHOEA, DEHYDRATION, AND ELECTROLYTE DISTURBANCE PATHWAY

Protocol 26: Rapid Stabilization, Rehydration, Infection Control, Cause-Directed Treatment, Electrolyte Rescue, Reassessment, and Safe Disposition

DRAFT FOR EMERGENCY MEDICINE, INTERNAL MEDICINE, PAEDIATRICS, INFECTIOUS DISEASES / MICROBIOLOGY, NEPHROLOGY, ENDOCRINOLOGY, GASTROENTEROLOGY, GENERAL SURGERY, OBSTETRICS, CRITICAL CARE, PHARMACY, LABORATORY, INFECTION PREVENTION, PUBLIC HEALTH, EMS, TRANSFER, AND CLINICAL-GOVERNANCE REVIEW

STATUS: This is a draft clinical-governance document. Exact triage categories, fluid products, bolus volumes, oral-rehydration protocols, electrolyte replacement rates, antiemetic and antimicrobial doses, isolation precautions, stool-testing access, paediatric and pregnancy adaptations, monitoring intervals, observation criteria, public-health notification requirements, transfer arrangements, and discharge follow-up must be reconciled with current national guidance, local formulary, laboratory capability, infection-prevention policy, specialist availability, and approved linked protocols before implementation.

IMMEDIATE SAFETY RULE: Treat vomiting and diarrhoea as potential manifestations of shock, sepsis, surgical disease, pregnancy-related emergency, toxic-metabolic illness, endocrine crisis, intracranial disease, or dangerous electrolyte disturbance until these have been reasonably excluded. Rehydration must be measured, reassessed, and matched to losses; do not allow a presumed diagnosis of gastroenteritis to delay time-critical treatment.

Document control	Details
Document owner	Emergency Department / Medical Services Directorate / Nursing Services / Clinical Governance
Clinical leads	Emergency Medicine; Internal Medicine; Paediatrics; Infectious Diseases / Microbiology; Nephrology; Endocrinology
Supporting departments	Gastroenterology; General Surgery; Obstetrics; Critical Care; Pharmacy; Laboratory; Infection Prevention and Control; Public Health; EMS; Transfer Coordination
Applies to	Adults, adolescents, children, and pregnant or postpartum patients presenting with acute vomiting, diarrhoea, dehydration, abnormal fluid balance, or clinically important electrolyte disturbance
Linked protocols	Shock; Sepsis; Acute Abdominal Pain; Gastrointestinal Bleeding; Altered Mental Status; Diabetic Emergencies; Acute Kidney Injury; Poisoning; Pregnancy Emergencies; Paediatric Emergency Assessment; Infection Prevention; Transfer
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Approval	[Emergency Department / Medical Executive / Medicines Committee / Infection Control / Clinical Governance]

1. Purpose

To provide a standardized emergency-department pathway for acute vomiting, diarrhoea, dehydration, excessive gastrointestinal fluid loss, and associated electrolyte or acid-base disturbance. The protocol prioritizes rapid recognition of shock and dangerous alternative diagnoses, early oral rehydration whenever safe, measured intravenous or intraosseous fluid therapy when required, infection prevention, selective investigation and antimicrobial use, timely correction of life-threatening electrolyte abnormalities, repeated response-based assessment, and safe discharge, admission, or transfer.

2. Scope

This protocol covers acute gastroenteritis, food-borne and water-borne illness, acute watery diarrhoea including suspected cholera, dysentery, healthcare-associated diarrhoea, medication-related symptoms, dehydration from vomiting or diarrhoea, and common sodium, potassium, magnesium, calcium, phosphate, and acid-base complications. It does not replace dedicated pathways for diabetic ketoacidosis, hyperosmolar state, adrenal crisis, toxic ingestion, bowel obstruction, appendicitis, pancreatitis, meningitis, raised intracranial pressure, pregnancy-related vomiting, major gastrointestinal bleeding, or septic shock, although these may initially present with vomiting or diarrhoea and may coexist.

3. Core policy statements

- Assess severity before cause. Shock, altered mental status, respiratory distress, severe abdominal pain, peritonism, bilious or bloody emesis, bloody stool, anuria, severe electrolyte symptoms, or a high-risk host requires immediate senior review and parallel stabilization.
- Oral rehydration solution is first-line for most patients with mild to moderate dehydration who can drink safely. Use small, frequent measured volumes and replace ongoing stool or vomit losses.
- Use intravenous or intraosseous isotonic crystalloid for shock, severe dehydration, impaired consciousness, ileus, persistent inability to drink, or failed oral / nasogastric rehydration. Reassess after every bolus or defined fluid phase.
- Do not prescribe IV fluid as an open-ended order. Record indication, fluid, volume, rate, review time, urine-output plan, and biochemical monitoring.
- Continue breastfeeding and age-appropriate feeding once immediate resuscitation is complete. Prolonged fasting and routine use of clear fluids, juice, soft drinks, or sports drinks as substitutes for ORS are discouraged.
- Most acute infectious diarrhoea is self-limited and does not require antibiotics or stool testing. Test and treat selectively according to severity, host risk, inflammatory features, duration, outbreak context, and public-health implications.
- Avoid antimotility drugs in children, suspected dysentery, fever with inflammatory diarrhoea, toxic megacolon, suspected *Clostridioides difficile* infection, or possible Shiga-toxin-producing *Escherichia coli* infection.
- Treat severe symptomatic hyponatraemia, hyperkalaemia with ECG changes, severe hypokalaemia, torsades-associated hypomagnesaemia, and symptomatic hypocalcaemia as immediate resuscitation problems under approved emergency algorithms.
- Correct sodium disorders at a controlled rate with frequent measurements. Both under-treatment and overly rapid correction can cause permanent neurological injury.
- Children, older adults, pregnant patients, patients with renal / cardiac / liver disease, immunocompromised patients, and those with severe malnutrition require modified fluid plans and lower thresholds for senior review or admission.
- Use contact precautions and environmental cleaning for suspected infectious diarrhoea according to local policy. Promptly notify infection prevention and public health of suspected outbreaks, cholera, enteric fever, or other notifiable disease.
- Safe discharge requires restored or clearly improving hydration, stable vital signs, oral tolerance, acceptable urine output, no unresolved red flag, reviewed laboratory abnormalities, reliable supervision, written fluid and return instructions, and ownership of pending stool or laboratory results.

4. Definitions

Term	Operational definition
Acute diarrhoea	Three or more loose or watery stools in 24 hours, or a clear increase above the patient's normal pattern, generally lasting less than 14 days.
Persistent diarrhoea	Diarrhoea lasting 14 days or longer; requires reassessment for infection, inflammation, malabsorption, medication effect, immunodeficiency, or another chronic cause.
Dysentery / inflammatory diarrhoea	Visible blood or mucus in stool, often with fever, tenesmus, severe abdominal pain, or systemic toxicity.
Acute gastroenteritis	Acute diarrhoea with or without vomiting, fever, or abdominal cramps, commonly infectious but diagnosed only after dangerous alternatives are considered.
No / mild dehydration	Normal or minimally affected perfusion and mental state, thirst may be present, oral intake possible, and no signs of shock.
Moderate / some dehydration	Clinical evidence of volume deficit such as thirst, dry mucosa, reduced urine, tachycardia, delayed capillary refill, sunken eyes, reduced tears, or postural symptoms without established shock.
Severe dehydration / hypovolaemic shock	Marked perfusion failure, weak pulses, hypotension or narrow pulse pressure, altered consciousness, prolonged capillary refill, minimal urine, inability to drink, or severe WHO dehydration signs.
Oral rehydration solution (ORS)	A glucose-electrolyte solution formulated to promote sodium and water absorption; standard low-osmolality WHO ORS contains sodium 75 mmol/L and glucose 75 mmol/L.
Ongoing losses	Fluid lost after initial assessment through stool, vomiting, nasogastric drainage, fistula, fever, or excessive urine output; these losses require separate replacement and reassessment.
Severe electrolyte disturbance	An electrolyte abnormality causing neurological, cardiac, respiratory, or muscular symptoms; ECG change; rapid physiological deterioration; or a concentration requiring monitored urgent correction.

5. Roles and accountability

Role	Minimum responsibility
Triage / first-contact clinician	Identify shock, dehydration, sepsis, severe pain, bilious or bloody emesis, bloody diarrhoea, altered consciousness, high-risk host, pregnancy, outbreak clues, and need for isolation or immediate senior escalation.
Lead ED clinician	Direct ABCDE care; define severity and differential diagnosis; prescribe measured rehydration and electrolyte treatment; activate surgical, paediatric, obstetric, renal, endocrine, infectious-disease, public-health, and transfer pathways.
Nursing team	Initiate isolation and monitoring, obtain weight when feasible, administer measured ORS / IV fluids / medicines, quantify losses, record intake and urine output, obtain repeat observations, and escalate failure to improve.
Paediatrics	Support age-specific dehydration assessment, weight-based fluids and medicines, feeding, safeguarding, and admission or transfer decisions.
Microbiology / infectious diseases / public health	Advise on stool testing, empiric and directed antimicrobials, suspected outbreaks, notifiable disease, antimicrobial resistance, and infection-control measures.
Nephrology / endocrinology / critical care	Guide severe sodium, potassium, magnesium, calcium, phosphate, acid-base, renal, endocrine, or dialysis-related emergencies and high-risk correction plans.
Surgery / gastroenterology / obstetrics	Assess dangerous abdominal, hepatobiliary, pancreatic, bowel, pregnancy-related, or procedural causes and provide definitive treatment.
Pharmacy / laboratory	Support urgent electrolyte results, specimen handling, medication compatibility, replacement formulations, renal / paediatric dosing, antimicrobial stewardship, and high-risk medicine safeguards.
Infection prevention / environmental services	Implement isolation, cleaning, outbreak-control, linen, waste, and staff-exposure procedures.
Receiving / transfer team	Accept clinical responsibility explicitly, confirm destination capability, and ensure continuity of fluid, electrolyte, isolation, and monitoring plans during transport.

6. Pathway activation and triage

Category	Operational criteria
RED / immediate resuscitation	Shock or rapidly worsening perfusion; severe dehydration; altered consciousness; seizure; major electrolyte ECG changes; respiratory compromise; bilious or bloody emesis with instability; peritonism; toxic megacolon; severe sepsis; anuria; suspected endocrine or metabolic crisis.
ORANGE / very urgent	Persistent vomiting with failed oral intake; moderate dehydration in infant, frail older adult, pregnancy, renal / cardiac disease, or immunocompromise; bloody diarrhoea; severe pain; high fever; oliguria; sodium or potassium abnormality; suspected cholera / outbreak; repeated ED attendance.
YELLOW / urgent	Stable vomiting or diarrhoea with mild to moderate dehydration, need for observed oral rehydration, targeted testing, or medication review.
GREEN / lower acuity only after screening	Mild, short-duration symptoms, normal perfusion and mental state, no red flag or high-risk condition, tolerating fluids, and reliable home care. Clinician assessment remains required.

7. First 10 minutes: parallel action

1. Apply standard precautions and contact precautions when infectious diarrhoea is suspected; place the patient in an appropriate clinical area and provide immediate access to a toilet or commode without delaying resuscitation.
2. Perform ABCDE assessment, obtain complete vital signs, mental status, capillary refill, point-of-care glucose, weight when feasible, pain score, pregnancy status where relevant, and a rapid dehydration / shock classification.
3. Identify dangerous features: bilious or bloody emesis, haematemesis, melaena, haematochezia, peritonism, severe headache, neck stiffness, focal deficit, toxic ingestion, severe hyperglycaemia / ketones, adrenal-risk history, sepsis, or anuria.
4. Begin measured ORS immediately for an alert patient who can swallow safely. Use small frequent sips, spoon, syringe, or nasogastric route if clinically appropriate.

5. For shock or severe dehydration, obtain IV / IO access, draw urgent bloods, start isotonic crystalloid under a defined resuscitation plan, and reassess after each bolus or fluid phase.
6. Obtain ECG promptly for severe weakness, syncope, palpitations, renal failure, significant sodium / potassium / magnesium / calcium disturbance, or medication risk.
7. Stop or review nephrotoxic, diuretic, laxative, metformin, SGLT2 inhibitor, renin-angiotensin system blocker, NSAID, and other relevant medicines according to clinical context and local sick-day guidance.
8. Escalate early to paediatrics, surgery, obstetrics, critical care, nephrology, endocrinology, microbiology, infection prevention, public health, or transfer services when criteria are met.

8. Immediate stabilization: ABCDE

8.1 Airway and breathing

- Position to reduce aspiration risk; suction available. Consider airway protection for coma, recurrent seizure, uncontrolled large-volume emesis, or severe encephalopathy.
- Give oxygen for hypoxaemia or critical illness, not routinely for normal saturation. Assess for aspiration pneumonitis, pneumonia, Kussmaul breathing, pulmonary oedema, or respiratory muscle weakness from electrolyte disturbance.
- Use capnography and arterial / venous blood gas when ventilation, severe acidosis, toxic ingestion, or critical illness is suspected.

8.2 Circulation and perfusion

- Assess pulse quality, blood pressure, capillary refill, skin temperature, postural symptoms when safe, jugular venous pressure, lung signs, oedema, urine output, and bedside ultrasound where available.
- In shock, give an age- and comorbidity-adjusted isotonic crystalloid bolus and reassess immediately. Adults commonly receive 250-500 mL aliquots; children commonly receive 10 mL/kg aliquots when shock is present, with early senior review and smaller aliquots in cardiac / renal / malnutrition risk.
- Suspected cholera or profound diarrhoeal dehydration may require a structured WHO rapid-rehydration plan after immediate shock assessment. Do not use a fixed large-volume plan without repeated review in pregnancy, frailty, heart failure, renal disease, severe malnutrition, or uncertain diagnosis.
- If perfusion does not improve as expected, reconsider septic, haemorrhagic, cardiogenic, endocrine, toxic, or obstructive shock and activate the appropriate pathway rather than simply continuing fluid.

8.3 Disability and exposure

- Check glucose, GCS / AVPU, pupils, seizure activity, focal neurology, meningism, temperature, and evidence of intoxication or withdrawal.
- Treat hypoglycaemia immediately. Consider DKA / HHS, adrenal crisis, severe sodium disturbance, uraemia, hepatic encephalopathy, meningitis, and intracranial pathology.
- Inspect hydration, abdomen, stool or emesis when available, skin turgor, mucosa, tears, eyes, extremity perfusion, rash, pressure areas, ostomy output, and signs of malnutrition or neglect while preserving dignity and infection-control precautions.

9. Dehydration assessment and fluid strategy

Severity / pattern	Typical findings	Initial strategy
No or mild dehydration	Alert, normal pulses and perfusion, moist or slightly dry mucosa, urine preserved, drinking normally or with thirst.	Oral fluids / ORS, replace ongoing losses, continue feeding, no routine IV fluid, reassess before discharge.
Moderate / some dehydration	Thirst, dry mucosa, reduced urine, tachycardia, postural symptoms, delayed refill, sunken eyes / reduced tears in children, but no established shock.	Observed ORS, commonly about 75 mL/kg over 4 hours using WHO Plan B principles; use NG route if needed and safe. Reassess at least hourly and at completion.
Severe dehydration / shock	Altered or lethargic, weak pulses, hypotension or narrow pulse pressure, prolonged refill, cold extremities, anuria, unable to drink, deep breathing.	Immediate IV / IO isotonic crystalloid, urgent bloods, close monitoring, structured replacement of deficit and ongoing losses, early senior / critical-care review.
Hypertonic dehydration	Marked thirst, irritability, doughy skin, neurological symptoms, serum sodium elevated; signs may underestimate volume loss.	Restore circulation first with isotonic fluid, then correct free-water deficit slowly with specialist input and frequent sodium checks.
Fluid-overload risk	Heart failure, advanced kidney or liver disease, frailty, pregnancy complications, severe malnutrition, oliguria / anuria.	Use smaller aliquots, ultrasound / haemodynamic reassessment, strict balance, early specialist input, and lower threshold for monitored admission.

REASSESSMENT RULE: The response to treatment is part of the diagnosis. After every bolus or defined ORS phase, document mental state, heart rate, blood pressure, capillary refill, respiratory status, lung findings, urine output, thirst, emesis / stool losses, and the next fluid decision.

10. Focused history

Domain	Key questions
Timing and pattern	Onset, frequency, duration, last episode, progression, nocturnal symptoms, ability to drink, urine frequency, weight change, prior episodes.
Vomiting features	Bilious, bloody, coffee-ground, projectile, faeculent, post-tussive, relation to meals, severe headache, vertigo, abdominal distension, pregnancy possibility.
Diarrhoea features	Watery, bloody, mucoid, black, pale, greasy, nocturnal, large-volume; tenesmus; stool frequency and approximate volume.
Exposures	Ill contacts, daycare / school / institution, recent travel, unsafe water, seafood, undercooked food, unpasteurized products, animals / reptiles, farm exposure, mass gathering, recent storm or water-system disruption.
Healthcare and medicines	Recent antibiotics, hospitalization, long-term care, feeding tube, laxatives, metformin, GLP-1 agonist, SGLT2 inhibitor, diuretics, chemotherapy, immunosuppression, opioids, alcohol or recreational drugs.
Comorbidity	Renal, cardiac, liver, endocrine, inflammatory bowel, coeliac, short bowel, ostomy, bariatric or abdominal surgery, malignancy, HIV, transplant, pregnancy, sickle cell disease.
Red-flag alternatives	Severe localized pain, peritonism, chest pain, syncope, polyuria, ketones, missed steroids, meningism, focal neurology, toxic ingestion, bowel obstruction, urinary symptoms, vaginal bleeding, testicular pain.
Public-health context	Other cases linked to food, event, workplace, school, cruise ship, hotel, care facility, water supply, or community outbreak; occupation as food handler, healthcare worker, or childcare worker.

11. Focused examination

- Record full vital signs, trend, weight, mental state, work of breathing, perfusion, capillary refill, peripheral temperature, mucosal moisture, tears, eye appearance, skin turgor, jugular venous pressure, oedema, and urine output.
- Examine the abdomen for distension, focal tenderness, guarding, rebound, mass, hernia, bowel sounds, organomegaly, ascites, stoma output, and surgical scars. Perform rectal examination only when it will change management and with consent.
- Assess for sepsis, rash, meningism, focal neurology, papilloedema clues, nystagmus, otological disease, chest infection, cardiac failure, endocrine pigmentation, ketotic breath, and toxicological signs.
- In children, assess interaction, fontanelle where age-appropriate, tears, sunken eyes, skin pinch, peripheral pulses, respiratory pattern, wet nappies, feeding, safeguarding, and caregiver ability.
- In pregnancy or postpartum, assess gestation, fetal / obstetric symptoms, blood pressure, headache, abdominal pain, vaginal bleeding, and hyperemesis complications; involve obstetrics early when indicated.

12. Time-critical diagnoses and red flags

Presentation / clue	Do not miss
Shock, high lactate, severe fever or hypothermia	Septic shock, cholera / profuse secretory diarrhoea, toxic megacolon, bowel ischaemia, adrenal crisis, haemorrhage.
Bilious vomiting, distension, obstipation, focal peritonism	Bowel obstruction, volvulus, strangulated hernia, perforation, appendicitis, intussusception, surgical abdomen.
Bloody emesis or melaena	Upper GI bleeding, varices, Mallory-Weiss tear, swallowed blood; activate GI bleeding pathway.
Bloody diarrhoea, severe pain, little fever	Shiga-toxin-producing E. coli and risk of haemolytic uraemic syndrome; avoid empiric antibiotics and antimotility agents until assessed.
Severe headache, meningism, focal deficit, morning / projectile vomiting	Meningitis, subarachnoid haemorrhage, raised intracranial pressure, stroke, cerebral venous thrombosis.
Hyperglycaemia, ketones, deep breathing	Diabetic ketoacidosis, hyperosmolar state, euglycaemic ketoacidosis with SGLT2 inhibitor.
Steroid dependence, hypotension, hyponatraemia, hyperkalaemia	Adrenal crisis; treat immediately under endocrine emergency pathway.
Pregnancy, pelvic pain, bleeding, severe persistent vomiting	Ectopic pregnancy, molar pregnancy, hyperemesis gravidarum, pre-eclampsia / HELLP, acute fatty liver.
Renal failure, weakness, palpitations, ECG change	Hyperkalaemia, severe hypokalaemia / hypomagnesaemia, uraemia, dialysis emergency.

Presentation / clue	Do not miss
Recent antibiotics / healthcare exposure with profuse diarrhoea	Clostridioides difficile infection, fulminant colitis, ileus, toxic megacolon.
Immunocompromised / neutropenic	Invasive bacterial infection, CMV colitis, neutropenic enterocolitis, opportunistic infection.
Infant or young child with lethargy, bilious vomiting, bloody stool	Sepsis, intussusception, volvulus, metabolic disease, non-accidental injury.

13. Targeted investigations

Test / study	Indications and interpretation
Point-of-care glucose	All significantly unwell patients, children, altered mental status, diabetes, poor intake, pregnancy, or prolonged symptoms.
Electrolytes, urea, creatinine, bicarbonate	Moderate / severe dehydration, high-risk host, prolonged losses, IV fluid need, renal or cardiac disease, altered mental state, weakness, arrhythmia, or admission.
Magnesium, calcium, phosphate	Severe or prolonged losses, malnutrition, alcohol use, arrhythmia, seizure, QT prolongation, renal disease, refeeding risk, or refractory potassium abnormality.
Venous / arterial blood gas and lactate	Shock, severe dehydration, sepsis, respiratory abnormality, DKA / HHS, toxic ingestion, significant acid-base concern, or poor response.
CBC and blood film	Bloody diarrhoea, severe infection, anaemia / bleeding, suspected HUS / TTP, immunocompromise, systemic toxicity, prolonged illness.
CRP / procalcitonin	May support severity assessment but must not substitute for examination or source-directed decision-making.
Ketones, serum osmolality	Diabetes, SGLT2 inhibitor, starvation, altered mental state, severe sodium disorder, toxic alcohol concern.
Urinalysis and pregnancy test	Dehydration, urinary symptoms, ketones, reproductive potential, abdominal / pelvic pain, or uncertain diagnosis.
ECG	Potassium / magnesium / calcium abnormality, severe weakness, syncope, palpitations, renal failure, QT-risk medicines, or significant dehydration.
Stool PCR / culture / toxin testing	Bloody or mucoid stool, fever, severe pain, sepsis, immunocompromise, prolonged course, outbreak, travel, public-health need, or suspected C. difficile. Follow local specimen criteria.
Blood cultures	Sepsis, enteric fever, immunocompromise, severe systemic illness, or invasive bacterial infection.
Imaging	Not routine for uncomplicated gastroenteritis. Use ultrasound / CT / radiography for focal pain, peritonism, obstruction, toxic megacolon, appendicitis, pancreatitis, intracranial concern, or another defined indication.

14. Oral and enteral rehydration therapy

- Use standard low-osmolality ORS whenever available. Do not dilute or concentrate packets incorrectly; mix only with the specified volume of safe water and discard according to manufacturer / infection-control instructions.
- For mild dehydration or prevention, encourage frequent ORS and replace ongoing losses. Adults may take approximately 200-250 mL or as tolerated after each loose stool; children should receive age- / weight-appropriate replacement under the local paediatric pathway.
- For some / moderate dehydration, a practical WHO-based starting plan is approximately 75 mL/kg over 4 hours, divided into frequent small volumes. Give more if continuing losses are substantial and less if signs of overhydration appear.
- If vomiting occurs, pause briefly, then restart more slowly using spoon, syringe, small cup, or continuous small-volume administration. A single approved antiemetic dose may facilitate ORS in selected patients.
- Nasogastric ORS is effective when the patient cannot drink enough but has a protected airway and no ileus, obstruction, severe abdominal distension, or other contraindication. Use a measured pump / schedule and close observation.
- Continue breastfeeding throughout. Resume normal age-appropriate diet after initial rehydration; avoid prolonged bowel rest. Routine dilution of milk or lactose-free diet is unnecessary unless clinically indicated.
- Do not use plain water alone for substantial ongoing diarrhoeal losses. High-sugar drinks, undiluted juice, carbonated drinks, and many sports drinks may worsen diarrhoea or produce inappropriate sodium delivery.

15. Intravenous / intraosseous fluid therapy

Clinical need	Approach and safeguards
Shock	Isotonic crystalloid in measured boluses with immediate reassessment. Adults often 250-500 mL per aliquot; children generally 10 mL/kg per aliquot with senior review. Use smaller aliquots in fluid-overload risk.
Severe diarrhoeal dehydration / suspected cholera	After immediate shock assessment, WHO Plan C principles may be used: total 100 mL/kg of Ringer lactate or approved isotonic fluid, delivered rapidly with age-specific phases and frequent review; start ORS as soon as the patient can drink.
Adult severe dehydration without shock	Estimate deficit, ongoing losses, maintenance, comorbidity, sodium status, and oral capacity. Use an explicit replacement plan rather than repeated unstructured boluses.
Paediatric severe dehydration	Use approved paediatric Plan C / IV-fluid guideline and weight-based monitoring. Avoid hypotonic resuscitation fluids. Senior paediatric input is required for infants, malnutrition, renal / cardiac disease, or sodium disorder.
Ongoing losses	Measure or estimate stool, emesis, stoma, or drain losses and replace separately with an appropriate fluid and electrolyte composition. Recheck electrolytes during continuing high-output losses.
Maintenance	Prescribe only after resuscitation and replacement needs are separated. Use the 5 Rs: resuscitation, routine maintenance, replacement, redistribution, and reassessment.
Failure to improve	Reconsider diagnosis, ongoing unmeasured losses, sepsis, renal failure, endocrine crisis, cardiac dysfunction, third spacing, bleeding, or need for vasopressor / critical care support.

16. Vomiting management

- Treat the cause and rehydrate; antiemetics are adjuncts, not substitutes for diagnosis or fluid therapy.
- Consider an approved antiemetic for persistent vomiting that prevents ORS or required medication. Select by age, pregnancy status, ECG / QT risk, Parkinsonism, bowel obstruction risk, and local formulary.
- Ondansetron may facilitate oral rehydration in selected children and adults but can prolong QT, especially with hypokalaemia or hypomagnesaemia. Use a single weight-appropriate dose in children when locally approved and avoid routine repeated outpatient dosing.
- Metoclopramide and dopamine antagonists carry extrapyramidal, sedation, and QT risks and may be inappropriate in children, Parkinson disease, bowel obstruction, or certain neurological conditions.
- Do not mask bilious vomiting, peritonism, raised intracranial pressure, DKA, adrenal crisis, toxic ingestion, or pregnancy-related emergency with repeated antiemetics without reassessment.
- Persistent vomiting despite treatment, inability to retain ORS, worsening pain, reduced urine, abnormal neurology, or recurrent ED attendance requires escalation and diagnostic review.

17. Acute diarrhoea and infectious gastroenteritis

- Most uncomplicated acute watery diarrhoea is managed with ORS, continued feeding, hygiene advice, and observation or home care. Antibiotics and stool testing are usually unnecessary.
- Bloody stool, high fever, severe abdominal pain, sepsis, immunocompromise, very young or frail patient, travel, outbreak exposure, or duration beyond the expected course requires targeted investigation and specialist / public-health consideration.
- Adults with mild afebrile watery diarrhoea may use an approved antimotility agent if there is no blood, inflammatory disease, C. difficile concern, toxic megacolon, or high-risk infection. Avoid in children unless a paediatric specialist pathway explicitly permits it.
- Consider non-infectious causes including medication effect, inflammatory bowel disease, ischaemic colitis, endocrine disease, overflow diarrhoea, malabsorption, pancreatic disease, and post-surgical high-output states.
- For suspected cholera or other profuse watery diarrhoea, prioritize rapid rehydration, strict fluid-loss measurement, isolation, early public-health notification, and locally recommended antibiotic therapy for severe disease.
- For suspected Shiga-toxin-producing E. coli, avoid empiric antibiotics and antimotility agents while obtaining appropriate stool testing and monitoring CBC, platelets, renal function, urine output, and haemolysis markers.

18. Stool testing, infection prevention, and notification

Issue	Operational approach
Who to test	Severe inflammatory diarrhoea, sepsis, bloody stool, immunocompromise, suspected enteric fever / cholera, prolonged or recurrent illness, outbreak, recent hospitalization / antibiotics, or public-health indication.

Issue	Operational approach
Specimen quality	Send fresh unformed stool in the correct container. Do not test formed stool for <i>C. difficile</i> . Label onset, travel, antibiotic exposure, outbreak link, and requested pathogens.
Isolation	Use contact precautions, dedicated toilet / commode, gloves and gown according to local policy, meticulous hand hygiene, and sporicidal cleaning for suspected <i>C. difficile</i> .
Hand hygiene	Soap and water is preferred after caring for patients with suspected <i>C. difficile</i> or visible soiling; follow local infection-prevention policy for alcohol-based hand rub use.
Food handlers / healthcare / childcare workers	Apply occupational exclusion and clearance rules through public health / occupational health; do not rely on informal advice.
Outbreaks and notifiable disease	Notify infection prevention and public health promptly for linked cases, suspected cholera, enteric fever, institutional outbreaks, unusual severity, contaminated water / food, or other legally notifiable conditions.
Pending results	Assign a named clinician / service to review, contact the patient, adjust therapy, and communicate public-health actions after discharge.

19. Antimicrobial principles

Scenario	Principle
Uncomplicated acute watery diarrhoea	No empiric antibiotic in most immunocompetent patients. Rehydration is primary treatment.
Severe dysentery / invasive bacterial disease	Obtain stool testing and consider empiric therapy when systemic toxicity, immunocompromise, very young age, or high-risk travel / epidemiology is present. Use local susceptibility data.
Possible STEC	Avoid antibiotics and antimotility drugs until Shiga toxin is excluded or expert advice obtained because of HUS risk.
Suspected cholera with severe dehydration	Give locally recommended antibiotic therapy after rehydration has started; single-dose regimens may be used according to susceptibility and pregnancy / age considerations.
Enteric fever / bacteraemia	Obtain blood cultures and treat under infectious-disease / local antimicrobial guidance.
Traveller's diarrhoea	Antibiotics may be considered for severe or disabling disease, dysentery, or high-risk hosts; resistance patterns and destination exposure matter.
Parasites	Test and treat selectively for persistent diarrhoea, relevant travel / water exposure, immunocompromise, or specific syndrome; avoid blind multi-drug therapy.
Antibiotic stewardship	Document indication, specimen plan, agent, dose, duration, renal / pregnancy considerations, review date, and stop / narrow plan.

20. Suspected *Clostridioides difficile* infection

- Suspect in new unexplained diarrhoea with recent antibiotics, hospitalization, long-term care, chemotherapy, immunosuppression, or prior *C. difficile*, but community-acquired disease can occur without classic risk factors.
- Place under contact precautions, use a dedicated toilet / commode, and apply approved sporicidal environmental cleaning. Test only clinically compatible unformed stool unless ileus prevents passage and expert guidance supports another method.
- Stop unnecessary inciting antibiotics, laxatives, and acid suppression where clinically safe. Correct fluid, electrolyte, renal, and nutritional complications.
- Assess severity using clinical status, white count, creatinine, lactate, abdominal examination, ileus, megacolon, and organ failure. Fulminant disease requires immediate infectious-disease, surgical, and critical-care involvement.
- Treat with the locally approved oral agent and regimen. Current adult guidance commonly prioritizes fidaxomicin or oral vancomycin depending on availability, recurrence risk, and formulary.
- Do not perform routine test of cure. Provide recurrence advice and a clear plan for repeat symptoms.

21. Electrolyte and acid-base emergencies

21.1 Hyponatraemia

- Confirm glucose, serum osmolality, volume status, renal function, urine osmolality / sodium when appropriate, and medication / endocrine causes. Vomiting and diarrhoea can coexist with hypovolaemic, euvoalaemic, or hypervolaemic hyponatraemia.

- Seizure, coma, severe confusion, cardiorespiratory distress, or other severe symptoms attributed to hyponatraemia require immediate monitored hypertonic saline under the approved algorithm. A 3% saline bolus of 100-150 mL over about 10-20 minutes may be repeated to achieve an initial 4-6 mmol/L rise or symptom improvement.
- Measure sodium frequently during active correction. Avoid correction beyond the locally approved ceiling, generally no more than 8 mmol/L in 24 hours and less in patients at high risk of osmotic demyelination such as severe malnutrition, alcoholism, liver disease, hypokalaemia, or very low chronic sodium.
- If overcorrection occurs or brisk water diuresis develops, obtain urgent endocrine / renal / critical-care advice and use the approved desmopressin / free-water rescue pathway.

21.2 Hypernatraemia

- Assess acuity, neurological symptoms, ongoing water loss, diabetes insipidus, osmotic diuresis, sodium gain, renal function, and ability to access water.
- Restore circulation first with isotonic crystalloid if shocked. Once perfusion is restored, replace free-water deficit orally / enterally or with an appropriate IV solution under a calculated plan.
- Chronic or uncertain-duration hypernatraemia is generally corrected slowly, commonly aiming for no more than about 10 mmol/L per 24 hours, with more frequent review in children and severe cases. Acute sodium loading may require a different specialist-led rate.
- Measure sodium, glucose, urine output, and neurological status frequently; account for continuing diarrhoea, fever, or polyuria.

21.3 Hypokalaemia and hypomagnesaemia

- Obtain ECG and magnesium for severe weakness, K less than 3.0 mmol/L, rapid loss, digoxin use, cardiac disease, or QT-risk medicine. Correct magnesium when low or potassium may remain refractory.
- Use oral potassium when the patient is stable, can tolerate it, and there is no urgent ECG / neurological indication. IV replacement is reserved for severe, symptomatic, ECG-associated, or oral-intolerant cases.
- Never give potassium by IV push. Use the approved concentration, pump, line, and monitoring policy. Peripheral replacement is commonly limited to 10 mmol/hour; faster central-line replacement requires continuous monitoring and critical-care oversight.
- Treat torsades or severe symptomatic hypomagnesaemia immediately with IV magnesium under the resuscitation algorithm, while correcting potassium and removing QT-prolonging causes.

21.4 Hyperkalaemia

- Repeat a potentially haemolysed sample when clinically safe, but do not delay treatment for a credible severe value, ECG changes, weakness, renal failure, or rapidly rising potassium.
- Obtain immediate ECG and continuous monitoring. Give IV calcium for toxic ECG changes according to the approved formulation and dose; calcium stabilizes the myocardium but does not lower potassium.
- Shift potassium intracellularly with insulin-glucose and consider nebulized salbutamol; monitor glucose closely for at least 6 hours or according to the local hyperkalaemia pathway. Bicarbonate is reserved for selected severe metabolic acidosis.
- Remove potassium with appropriate binders, diuretics when effective, correction of cause, and urgent dialysis when refractory, severe, or associated with renal failure / overload. Recheck potassium and ECG at defined intervals.

21.5 Calcium, phosphate, and acid-base disturbance

- Symptomatic hypocalcaemia with tetany, seizure, laryngospasm, hypotension, or QT prolongation requires IV calcium under the approved emergency guideline; check magnesium and identify cause.
- Severe hypophosphataemia can cause respiratory failure, weakness, haemolysis, or rhabdomyolysis. Replace under a monitored protocol, especially in malnutrition, alcohol use, DKA recovery, or refeeding.
- Gastrointestinal bicarbonate loss commonly causes normal-anion-gap metabolic acidosis; vomiting commonly causes chloride-responsive alkalosis. Do not treat the number alone: correct volume, chloride, potassium, renal failure, sepsis, or other cause.
- Patients with prolonged poor intake or substantial weight loss may be at risk of refeeding syndrome. Check phosphate, magnesium, potassium, and thiamine needs and start nutrition under an approved cautious plan.

22. Special populations

Group	Additional safeguards
Infants and children	Use age-adjusted vital signs, measured weight, WHO / local dehydration signs, weight-based ORS and IV fluids, continued breastfeeding, and early paediatric review. Zinc supplementation for 10-14 days may be part of national policy for children with diarrhoea.
Older adult / frailty	May have blunted tachycardia, rapid AKI, delirium, medication toxicity, falls, and limited reserve. Use conservative discharge thresholds and assess support, continence, and ability to prepare ORS.
Pregnancy / postpartum	Avoid maternal hypotension, involve obstetrics for significant illness, distinguish hyperemesis and pregnancy emergencies, use pregnancy-compatible antiemetics / antibiotics, and monitor fetal considerations where gestationally appropriate.

Group	Additional safeguards
Cardiac / renal / liver disease	Use smaller fluid aliquots, strict balance, lung and venous-congestion assessment, early specialist input, and individualized electrolyte replacement. Dialysis patients may need urgent renal replacement rather than additional fluid.
Severe malnutrition	Standard dehydration signs may be unreliable and rapid fluid can be harmful. Use the approved malnutrition pathway, cautious ORS / IV therapy, glucose, temperature, and electrolyte monitoring.
Immunocompromised / neutropenic	Lower threshold for cultures, imaging, admission, antimicrobial therapy, and specialist input. Consider neutropenic enterocolitis, CMV, disseminated infection, and medication toxicity.
High-output stoma / short bowel	Measure losses, use sodium-rich replacement rather than plain water, assess magnesium and renal function, involve gastroenterology / nutrition, and create a home fluid plan.
Recent bariatric / abdominal surgery	Consider obstruction, leak, internal hernia, thiamine deficiency, dumping, and surgical complications. Early surgical review may be required despite mild abdominal findings.

23. Monitoring, reassessment, and observation

Parameter	Minimum approach
Vital signs and perfusion	Frequency based on severity; after each bolus, major stool / emesis episode, medication, or clinical change. Use continuous monitoring in severe electrolyte disturbance or shock.
Fluid balance	Record ORS, IV fluid, urine, stool, emesis, stoma / drain loss, and net balance. Weigh nappies or use calibrated collection when appropriate.
Weight	Obtain baseline and repeat in children, prolonged observation, major rehydration, or fluid-overload risk when feasible.
Laboratory tests	Repeat electrolytes, glucose, creatinine, bicarbonate, magnesium, phosphate, lactate, or gas at intervals determined by severity and treatment. Active sodium correction may require 1-2 hourly checks.
ECG	Continuous or serial ECG for severe potassium, magnesium, calcium disturbance, QT-risk medicines, or arrhythmia.
Oral challenge	Document measured intake, vomiting, thirst, mental state, urine, and ability to continue at home. A tolerated sip alone is not an adequate challenge in significant dehydration.
Diagnostic review	Failure to improve within the expected timeframe requires senior reassessment and reconsideration of surgical, metabolic, endocrine, neurological, toxicological, or septic diagnoses.

24. Disposition

Disposition	Criteria
Resuscitation / critical care	Persistent shock, severe sepsis, airway risk, severe sodium or potassium symptoms, recurrent seizure, severe acidosis, vasopressor need, anuria, organ failure, toxic megacolon, or need for invasive monitoring.
Admission	Failed ORS, continuing high losses, moderate / severe dehydration not fully corrected, significant AKI or electrolyte abnormality, bloody diarrhoea with systemic illness, C. difficile severity, uncertain diagnosis, high-risk comorbidity, unsafe social situation, or inability to follow up.
Observation unit	Stable patient requiring structured ORS / IV replacement, repeat electrolytes, oral challenge, serial abdominal examination, or short public-health / diagnostic clarification within a defined maximum stay.
Transfer	Need for paediatric intensive care, dialysis, critical care, surgery, obstetrics, specialist infectious-disease care, endoscopy, advanced imaging, or monitoring not available locally.
Discharge	Stable and improving physiology, no red flag, adequate oral intake, urine output present, manageable ongoing losses, reviewed labs, safe medicine plan, reliable supervision, written instructions, and follow-up / pending-result ownership.

25. Discharge information and safety net

- Provide written ORS preparation and administration instructions, expected course, food and breastfeeding advice, medication directions, infection-control measures, and the amount / frequency of replacement after each stool or emesis episode.
- Advise immediate return for inability to drink, repeated vomiting, reduced or absent urine, fainting, worsening weakness, confusion, seizure, blood or black stool, green / bilious or bloody vomit, severe or localized abdominal pain, abdominal distension, persistent high fever, breathing difficulty, or symptoms lasting longer than advised.
- Explain medicine changes and restart plan, including diabetes and sick-day rules where relevant. Do not provide vague instructions to stop essential medicines indefinitely.
- Give occupation / school / childcare exclusion advice only according to public-health policy, and document who will communicate positive stool results.
- For children, confirm caregiver understanding by teach-back, ability to prepare ORS, wet-nappy expectations, feeding plan, and access to urgent reassessment.

26. Transfer and handover

- Stabilize airway, perfusion, glucose, severe electrolyte disturbance, and temperature before departure as far as feasible. Do not delay definitive transfer for complete correction when the required capability is unavailable locally.
- Confirm accepting clinician, destination, isolation requirement, transport priority, escort skill, monitoring, oxygen, IV / IO access, infusions, ORS plan, and contingency for vomiting, arrhythmia, seizure, or shock.
- Send serial observations, weight, intake / output, fluid and electrolyte calculations, laboratory trends, ECGs, stool / culture details, imaging, medicines, allergies, comorbidity, pregnancy status, and public-health notifications.
- Use closed-loop verbal handover and written transfer documentation. Transfer of responsibility occurs only after explicit acceptance.

27. Documentation and handover

- Document symptom onset, stool / vomit characteristics, exposures, dehydration classification, red flags considered, relevant comorbidity and medicines, examination, working diagnosis, and differential diagnosis.
- Record every fluid order with indication, type, dose / volume, route, rate, start and completion time, reassessment, response, ongoing-loss replacement, and next review.
- Record electrolyte values and trends, ECG findings, replacement / shifting therapy, glucose monitoring, target correction rate, and senior or specialist advice.
- Document isolation, stool tests, antimicrobial rationale, outbreak / public-health communication, pending-result owner, discharge teach-back, and exact return precautions.

28. Quality indicators and audit

Indicator	Suggested measure
Early severity assessment	Percentage with documented vital signs, glucose, hydration / shock classification, and weight in children within the locally defined timeframe.
ORS use	Percentage of eligible mild / moderate dehydration cases offered measured ORS before IV fluid.
Fluid safety	Percentage of IV-fluid prescriptions with indication, amount, rate, review time, and documented post-bolus reassessment.
Electrolyte safety	Time to ECG and treatment for severe hyperkalaemia; sodium correction within approved limits; hypoglycaemia after insulin-glucose treatment.
Antimicrobial stewardship	Proportion of uncomplicated watery diarrhoea receiving unnecessary antibiotics; documentation of indication and review plan.
Infection prevention	Timely isolation, appropriate stool testing, and required public-health notification.
Disposition safety	Reattendance within 72 hours, unplanned admission, missed surgical / metabolic diagnosis, AKI progression, arrhythmia, seizure, ICU transfer, and mortality.

29. Training and implementation

- Conduct multidisciplinary simulation for paediatric and adult severe dehydration, suspected cholera, severe hyponatraemia, hyperkalaemia, and failed ORS.
- Standardize ORS availability, preparation instructions, calibrated cups / syringes, paediatric scales, fluid pumps, electrolyte replacement products, ECG access, and isolation supplies.
- Maintain locally approved quick-reference algorithms for Plan A / B / C, adult IV fluids, antiemetics, antimicrobials, *C. difficile*, sodium correction, hyperkalaemia, potassium replacement, and public-health notification.

- Audit fluid and antibiotic prescribing, review adverse events and diagnostic misses, and update the protocol when national guidance, resistance patterns, formulations, or local capability change.

ANNEX A. One-page workflow

Step	Action
1. Protect and triage	Standard / contact precautions; identify shock, severe dehydration, severe pain, blood / bile, altered mental state, electrolyte symptoms, high-risk host.
2. Stabilize	ABCDE, glucose, weight, monitoring, ORS if safe; IV / IO isotonic crystalloid for shock or severe dehydration; ECG for electrolyte risk.
3. Exclude dangerous causes	Surgical abdomen, sepsis, GI bleed, DKA / HHS, adrenal crisis, pregnancy emergency, intracranial disease, toxic ingestion, C. difficile / toxic megacolon.
4. Classify dehydration	No / mild, some / moderate, severe / shock, hypertonic, or overload risk.
5. Investigate selectively	Electrolytes / renal function, gas / lactate, CBC, ketones, pregnancy test, ECG, stool tests, cultures, imaging based on risk.
6. Rehydrate and replace	Measured ORS; NG if appropriate; IV / IO when indicated; replace ongoing losses; continue feeding; reassess repeatedly.
7. Treat cause / complications	Selective antiemetic, antimicrobial stewardship, isolation / public health, correct dangerous electrolytes under approved algorithms.
8. Disposition	Discharge only after oral tolerance, improving hydration, urine, reviewed labs, no red flag, reliable care and follow-up; otherwise observe, admit, or transfer.

ANNEX B. Immediate red-flag card

- [] Shock, weak pulses, hypotension, prolonged capillary refill, altered consciousness, anuria.
- [] Bilious / bloody / faeculent emesis; haematemesis; melaena; large-volume haematochezia.
- [] Severe localized abdominal pain, guarding, rebound, distension, absent stool / flatus.
- [] Bloody diarrhoea with severe pain, systemic toxicity, oliguria, pallor, bruising, or thrombocytopenia.
- [] Seizure, focal neurology, meningism, severe headache, papilloedema concern.
- [] Hyperglycaemia / ketones, missed steroids, toxic ingestion, severe renal failure.
- [] ECG change, palpitations, syncope, profound weakness, severe sodium / potassium / magnesium / calcium abnormality.
- [] Infant, frail older adult, pregnancy / postpartum, severe malnutrition, immunocompromise, dialysis, or significant cardiac disease.
- [] Recent antibiotics / hospitalization with severe diarrhoea, ileus, megacolon, or high lactate.
- [] Cluster of cases, suspected unsafe water / food, cholera, or institutional outbreak.

ANNEX C. First-10-minute checklist

- [] Isolation / PPE and safe toilet or commode arranged without delaying resuscitation.
- [] ABCDE, full vital signs, mental status, glucose, weight, pregnancy status, pain score.
- [] Dehydration / shock class and fluid-overload risk documented.
- [] Dangerous alternative diagnoses actively screened.
- [] Measured ORS started if safe; IV / IO access and isotonic crystalloid if shock / severe dehydration.
- [] Bloods, ECG, ketones, cultures, stool tests, and imaging ordered only as indicated.
- [] Ongoing stool / emesis / urine measurement started.
- [] Senior and specialty escalation triggered when indicated.
- [] Next reassessment time documented.

ANNEX D. Dehydration severity card

Feature	No / mild	Some / moderate	Severe / shock
Mental state	Alert	Restless, irritable, tired	Lethargic, confused, unconscious
Thirst / drinking	Normal or thirsty	Drinks eagerly	Unable to drink or drinks poorly
Pulse / perfusion	Normal	Tachycardia, mildly delayed refill	Weak / rapid pulse, prolonged refill, cold extremities

Feature	No / mild	Some / moderate	Severe / shock
Blood pressure	Normal	May be normal or postural fall	Hypotension / narrow pulse pressure may be late
Mucosa / eyes / tears	Normal or mildly dry	Dry, sunken eyes / reduced tears	Very dry, markedly sunken eyes / absent tears
Urine	Normal or mildly reduced	Reduced / dark	Minimal or absent
Initial action	ORS and replace losses	Observed ORS about 75 mL/kg over 4 h	IV / IO isotonic fluid, urgent senior review, ORS when able

ANNEX E. Oral rehydration card

- [] Use standard low-osmolarity ORS; mix exactly as directed with safe water.
- [] Give small frequent volumes by cup, spoon, or syringe; pause briefly after vomiting and restart more slowly.
- [] Some dehydration: start approximately 75 mL/kg over 4 hours and reassess; adjust for ongoing loss and clinical response.
- [] Replace each ongoing stool / vomit loss with additional ORS under the age-appropriate plan.
- [] Continue breastfeeding and resume normal feeding after initial rehydration.
- [] Use NG ORS when drinking is inadequate but airway and gut are safe.
- [] Avoid plain water alone, high-sugar drinks, undiluted juice, and incorrectly mixed ORS.
- [] Stop and escalate for worsening mental state, shock, distension / ileus, repeated aspiration risk, or failure to improve.

ANNEX F. Paediatric Plan A / B / C card

Plan	Indication	Core actions
Plan A	No dehydration	Extra ORS after each loose stool, continued breastfeeding / feeding, zinc where national policy applies, hygiene and return advice.
Plan B	Some dehydration	ORS approximately 75 mL/kg over 4 hours in clinic; frequent small sips; continue breastfeeding; reassess and reclassify after 4 hours or earlier if worse.
Plan C	Severe dehydration	IV Ringer lactate or approved isotonic fluid, total 100 mL/kg using age-specific phases: under 12 months 30 mL/kg in 1 hour then 70 mL/kg over 5 hours; age 12 months or older 30 mL/kg in 30 minutes then 70 mL/kg over 2.5 hours. Give ORS about 5 mL/kg/hour as soon as able; reassess every 1-2 hours.
Special caution	Severe malnutrition, cardiac / renal disease, neonate, severe sodium disorder	Do not apply routine Plan C without senior paediatric / specialist adaptation.

ANNEX G. Adult fluid and ongoing-loss card

- [] Separate resuscitation, deficit replacement, maintenance, and ongoing losses.
- [] Shock: isotonic crystalloid 250-500 mL aliquots with immediate reassessment; smaller aliquots if overload risk.
- [] Some dehydration: ORS approximately 75 mL/kg over 4 hours when safe.
- [] Profound diarrhoeal dehydration / cholera: consider WHO 100 mL/kg structured IV plan after shock review; adapt for pregnancy, frailty, cardiac / renal disease.
- [] Replace measured stool / stoma / vomit losses with appropriate sodium- and potassium-containing fluid; recheck electrolytes.
- [] Record urine output and stop fluid escalation if pulmonary oedema, rising JVP, hypoxaemia, or no perfusion benefit.
- [] Failure to improve requires diagnostic time-out and senior review.

ANNEX H. Vomiting and antiemetic card

Question	Action
Is there a dangerous cause?	Check bile / blood, obstruction, peritonism, headache / neurology, DKA, adrenal crisis, pregnancy, toxin, sepsis.
Can ORS be delivered?	Small frequent sips, spoon / syringe, pause and restart, consider NG route if safe.
Is an antiemetic appropriate?	Use one approved age- and risk-appropriate agent to facilitate rehydration; review QT, electrolytes, pregnancy, Parkinsonism, obstruction, sedation.

Question	Action
Did it work?	Document measured oral intake and repeat examination; do not discharge solely because vomiting temporarily stops.
When to escalate?	Persistent inability to retain fluid, worsening pain, bilious / bloody vomit, reduced urine, abnormal neurology, repeated attendance.

ANNEX I. Infectious diarrhoea and stool-test card

- ☐ No routine stool test for short, uncomplicated watery diarrhoea in an immunocompetent stable patient.
- ☐ Test for blood / mucus, fever, severe pain, sepsis, immunocompromise, persistent course, outbreak, travel, recent antibiotics / healthcare exposure, or public-health need.
- ☐ Possible STEC: test for Shiga toxin; avoid empiric antibiotics and antimotility agents.
- ☐ Possible C. difficile: unformed stool only, isolation, sporicidal cleaning, no routine test of cure.
- ☐ Suspected cholera / enteric fever / outbreak: notify public health and microbiology early.
- ☐ Assign ownership of pending results before discharge.

ANNEX J. Antimicrobial and antimotility safety card

- ☐ Rehydration first; most acute watery diarrhoea needs no antibiotic.
- ☐ Document indication, severity, host risk, specimen plan, agent, duration, renal / pregnancy adjustment, and review date.
- ☐ Avoid antibiotics and antimotility drugs in suspected STEC until expert advice / results.
- ☐ Avoid antimotility drugs in children, dysentery, fever with inflammatory diarrhoea, C. difficile, ileus, or toxic megacolon.
- ☐ Use local susceptibility data for cholera, Shigella, traveller's diarrhoea, and enteric fever.
- ☐ Stop or narrow treatment when results and clinical course permit.

ANNEX K. C. difficile bundle

- ☐ Clinically compatible unexplained diarrhoea and risk factors assessed.
- ☐ Contact precautions, dedicated toilet / commode, hand hygiene, and sporicidal cleaning started.
- ☐ Only unformed stool sent; no routine repeat or test of cure.
- ☐ Unnecessary antibiotics, laxatives, and acid suppression reviewed.
- ☐ Severity assessed: WBC, creatinine, lactate, abdominal signs, ileus / megacolon, organ failure.
- ☐ Approved oral therapy started; fulminant disease escalated to ID / surgery / critical care.
- ☐ Recurrence and pending-result plan documented.

ANNEX L. Electrolyte rescue card

Emergency	Immediate principles
Severe symptomatic hyponatraemia	3% saline 100-150 mL bolus under approved algorithm; repeat if needed for symptom improvement / 4-6 mmol/L initial rise; frequent sodium; avoid overcorrection.
Hypernatraemia	Restore perfusion first, then calculated free-water replacement; generally limit chronic / uncertain correction to about 10 mmol/L/day; frequent sodium and urine monitoring.
Severe hypokalaemia	ECG, magnesium, oral if stable; IV via pump if severe / symptomatic / unable oral; never IV push; monitored rates per policy.
Hyperkalaemia	ECG, IV calcium for toxic changes, insulin-glucose, consider salbutamol, remove potassium, monitor glucose / potassium, urgent dialysis if indicated.
Torsades / severe hypomagnesaemia	IV magnesium under resuscitation algorithm; correct potassium and remove QT-prolonging factors.
Symptomatic hypocalcaemia	IV calcium under approved formulation and monitoring; check magnesium and cause.

ANNEX M. Monitoring chart

Time	HR / BP / RR / SpO ₂ / T	Mental state / perfusion	ORS / IV in	Stool / vomit / urine out	Labs / ECG	Decision / reviewer
Arrival						
After first bolus / 30 min						
1 hour						

Time	HR / BP / RR / SpO2 / T	Mental state / perfusion	ORS / IV in	Stool / vomit / urine out	Labs / ECG	Decision / reviewer
2 hours						
4 hours / Plan B review						
Pre-disposition						

ANNEX N. Observation and discharge checklist

- ☐ No shock, severe dehydration, red flag, or unresolved dangerous differential.
- ☐ Vital signs and mental state stable; patient mobilizes safely where appropriate.
- ☐ Measured oral intake tolerated and ongoing losses manageable at home.
- ☐ Urine output present; renal function and electrolyte abnormalities reviewed / improving.
- ☐ No concerning abdominal, neurological, pregnancy, sepsis, or C. difficile feature.
- ☐ Medicines, sick-day rules, ORS preparation, feeding, infection-control, and return precautions explained by teach-back.
- ☐ Responsible caregiver / transport / access to water and toilet confirmed.
- ☐ Follow-up and pending-result owner documented.

ANNEX O. Transfer and handover minimum dataset

- ☐ Onset, frequency, volume and character of stool / vomit; exposure and outbreak context.
- ☐ Weight, dehydration class, serial vital signs, mental state, perfusion, urine output.
- ☐ ORS / NG / IV / IO fluid type, volume, rate, timing, response, and ongoing-loss replacement.
- ☐ Electrolyte, renal, glucose, ketone, gas / lactate trends; ECG and arrhythmia details.
- ☐ Stool / blood cultures, isolation status, antimicrobials, public-health notification.
- ☐ Red flags and alternative diagnoses considered; imaging / surgical / obstetric findings.
- ☐ Comorbidity, pregnancy, allergies, medicines held / given, dialysis / endocrine risk.
- ☐ Receiving clinician, destination, transport monitoring, infusion / ORS plan, contingency for deterioration.

ANNEX P. Audit tool

Case review item	Yes / No / N/A / notes
Triage and dehydration / shock classification appropriate	
Weight and glucose documented when indicated	
ORS offered before IV fluid when eligible	
IV fluid indication, dose, rate, and reassessment documented	
Ongoing losses and urine output measured	
Dangerous alternative diagnoses addressed	
Stool testing and antibiotics appropriately selective	
Isolation / notification requirements met	
Electrolyte emergency treated and monitored safely	
Sodium correction remained within approved limits	
Discharge teach-back and pending-result ownership complete	
Reattendance, adverse event, missed diagnosis, ICU transfer, or death reviewed	

ANNEX Q. Local configuration checklist

- ☐ Approved adult and paediatric triage criteria, dehydration classification, fluid bolus and Plan A / B / C pathways.
- ☐ Stock and preparation process for low-osmolality ORS, calibrated cups / syringes, NG delivery, and patient handouts.
- ☐ Adult / paediatric IV-fluid charts, maintenance and ongoing-loss replacement, potassium-addition safeguards, and pump standards.
- ☐ Antiemetic, antibiotic, cholera, traveller's diarrhoea, dysentery, parasite, and C. difficile monographs linked to formulary and antibiogram.

- [] Severe hyponatraemia, hypernatraemia, hyperkalaemia, hypokalaemia, magnesium, calcium, phosphate, and refeeding algorithms.
- [] Laboratory critical-value communication, repeat-testing turnaround, ECG, blood gas, stool PCR / culture / toxin access.
- [] Isolation rooms, commodes, PPE, environmental cleaning, linen / waste, occupational exclusion, and outbreak notification procedures.
- [] Specialist contacts for paediatrics, surgery, obstetrics, nephrology, endocrinology, ID / microbiology, critical care, public health, and transfer.
- [] Observation duration, reassessment schedule, discharge criteria, follow-up access, pending-result ownership, audit lead, and protocol review date.

ANNEX R. References and source tools

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16. Local source tools to attach before approval: adult and paediatric fluid charts; ORS / Plan A-B-C materials; antiemetic and antimicrobial formulary; local antibiogram; C. difficile policy; electrolyte replacement and hyperkalaemia algorithms; severe hyponatraemia pathway; isolation / outbreak policy; public-health notification list; transfer directory; discharge instructions and sick-day rules.