

Paediatric Clinician Prescribing Guidelines

Paediatric Clinicians are health care professionals with a nursing or midwifery background who have undergone 27 months of additional training in paediatrics. The training programme is part of the task-sharing programme in partnership with the Liberia Ministry of Health and is a full-time clinical attachment with regular theory teaching sessions.

Paediatric Clinicians have been trained via a task-sharing model for capacity building with the aim of improving the hospital care of children and young people and reducing mortality and morbidity. They work under the supervision of a lead Doctor who should be available to give advice and review cases. During their training they have received basic pharmacology training for key medication required in an emergency and they are competent to prescribe these independently. Any patient requiring long term medication or medication that involves more serious risk should be discussed with the supervising doctor +/- the paediatric referral centre. This is to maintain patient safety and ensure adequate follow-up and monitoring is provided.

The following medication has been approved for independent prescribing by international trainers – those marked by an asterix should still be discussed prior to prescribing. The indications are not exhaustive and local adaptations can be made at the discretion of the lead Doctor depending on local sensitivities and drug availability.

Paediatric clinicians have been advised to use recognised sources for drug dosing – WHO Pocketbook of Hospital Care for Children Second Edition, MCAI Paediatric Handbooks 1 or 2, or local/national guidelines if available.

Steroids:

Dexamethasone (oral/intravenous)

- Indication: upper airway obstruction, acute wheeze

Hydrocortisone (intravenous)

- Indication: acute wheeze, anaphylaxis, adrenal crisis

Prednisolone (oral)

- Indication: acute wheeze, nephrotic syndrome (on discussion with supervising doctor)

Note: Paediatric Clinicians should seek guidance from supervising doctor in the event of a patient requiring a long term or high dose steroid prescription due to the risks associated of acute withdrawal or side effects.

Antimicrobials:

Amoxicillin (oral)

- Indication: non-severe pneumonia

Ampicillin (Intravenous)

- Indication: sepsis, severe pneumonia

Artesunate (Intravenous)

- Indication: severe malaria

Artemether & Lumefantrine (oral)

- Indication: malaria

Aciclovir (Intravenous)

- Indication: Encephalitis, disseminated Herpes infection

Ceftriaxone (Intravenous/intramuscular)

- Indication: sepsis, meningitis, epiglottitis

Cloxacillin (Oral/intravenous)

- Indication: skin infection, can be used as second line if concern regarding staphylococcus aureus infection

Clindamycin (Intravenous)

- Indication: adjunct in severe sepsis, concern regarding group A streptococcal infection

Erythromycin (Oral)

- Indication: atypical pneumonia, pertussis, use in penicillin allergy patients

Gentamicin (Intravenous)

- Indication: sepsis, severe pneumonia

Mebendazole (oral)

- Indication: Helminthic infection/routine de-worming

Metronidazole (intravenous)

- Indication: adjunct in abdominal infections

Quinine (oral)

- Indication: malaria

Note: Other antibiotics may be available and would generally be safe for prescription – to be agreed within the local department. Clinicians have been advised regarding the risks of Gentamicin/other aminoglycosides and continuing beyond 7 days will require review by lead Doctor. Anti-microbial stewardship has been discussed including the risk of resistance and when to review antibiotics.

Bronchodilator Therapy**Salbutamol (inhaled via spacer device, nebuliser)**

- Indication: acute wheeze

Ipratropium bromide (nebuliser)

- Indication: adjunct in severe acute wheeze

Magnesium Sulphate* (intravenous)

- Indication: severe/life-threatening wheeze, tetanus

Note: intravenous therapy may be indicated for wheeze such as IV magnesium, IV salbutamol and IV aminophylline. Paediatric clinicians should discuss with the supervising doctor if the patient needs escalation to intravenous medication. IV magnesium is relatively safe and effective, and they are aware of the risks including hypotension and arrhythmia. IV Salbutamol and Aminophylline will need to be prescribed under direct guidance from a senior doctor as close monitoring and high dependency care is required.

Anti-seizure medication

Diazepam (rectal/intravenous)

- Indication: Status epilepticus, tetanus

Phenobarbitone (intravenous)

- Indication: Status epilepticus

Note: Paediatric Clinicians should only prescribe benzodiazepines for status epilepticus and they are aware for the need to be competent at basic airway management and bag-valve mask ventilation in the event of respiratory depression. If sedation is required for procedures this should be done after discussion with the lead doctor and anaesthetic team. IV Phenytoin and levetiracetam are also options for status epilepticus but are not readily available. Long term anti-epileptic medication should be only started after consultation with lead doctor/paediatric referral team to ensure the correct diagnosis and follow-up.

Analgesia

Paracetamol (oral/intravenous)

- Indication: Pain, fever

Ibuprofen (oral)

- Indication: Pain, fever

Morphine* (oral/intravenous)

- Indication: Severe pain

Note: With respect to morphine all prescriptions need to be counter checked with the supervising doctor or a second colleague to ensure correct dosing. Paediatric clinicians are aware of the risks of morphine.

Other Medication

Adrenaline (nebulised)

- Indication: upper airway obstruction, life-threatening asthma

Adrenaline (intramuscular)

- Indication: anaphylaxis (1:1000)

Adrenaline (intravenous)

- Indication: cardiac arrest (1:10,000)

Note: Adrenaline can be used as an inotrope but this needs to be prescribed by the lead doctor and in conjunction with intensive care.

Insulin* (subcutaneous)

- Indication: Diabetic Ketoacidosis/Diabetes Mellitus

Note: Even at correct dosing insulin can cause hypoglycaemia and so must be prescribed under supervision of the lead doctor.

Furosemide* (oral/intravenous)

- Indication: fluid overload, cardiac failure

Note: Paediatric clinicians should only prescribe diuretics in the emergency setting. Indications should be discussed with the lead doctor prior to prescribing, especially in complex cases requiring careful fluid management.

Chlorphenamine (oral/intravenous)

- Indication: allergy

Macrogol (oral)

- Indication: Constipation

Lactulose (oral)

- Indication: Constipation

Senna (oral)

- Indication: Constipation

Note: Laxatives can be prescribed for inpatients on the ward. If a patient is requiring long term laxatives the diagnosis should be reviewed prior to discharge with the lead doctor.

Zinc (oral)

- Indication: Acute watery diarrhoea

Ferrous sulphate (oral)

- Indication: Anaemia

Folic acid (oral)

- Indication: Anaemia

Vitamin A (oral)

- Indication: Measles, severe diarrhoea, vitamin A eye disease

Fluids

Oral Rehydration Salts (oral)

- Indication: Dehydration

ReSoMaL (oral)

- Indication: Dehydration in the malnourished child

Ringer's Lactate Solution (Intravenous)

- Indication: Fluid bolus in shock

0.9% Sodium Chloride (Intravenous)

- Indication: Fluid bolus in shock

Ringer's Lactate Solution + 5% Dextrose (Intravenous)

- Indication: Routine maintenance fluid

0.9% Sodium Chloride + 5% Dextrose (Intravenous)

- Indication: Routine maintenance fluid

10% Dextrose (Intravenous)

- Indication: Hypoglycaemia