

## Annex 1

# 19th WHO Model List of Essential Medicines (April 2015)

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## Explanatory notes

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The **core list** presents a list of minimum medicine needs for a basic health-care system, listing the most efficacious, safe and cost-effective medicines for priority conditions. Priority conditions are selected on the basis of current and estimated future public health relevance, and potential for safe and cost-effective treatment.

The **complementary list** presents essential medicines for priority diseases, for which specialized diagnostic or monitoring facilities, and/or specialist medical care, and/or specialist training are needed. In case of doubt medicines may also be listed as complementary on the basis of consistent higher costs or less attractive cost-effectiveness in a variety of settings.

The **square box symbol (□)** is primarily intended to indicate similar clinical performance within a pharmacological class. The listed medicine should be the example of the class for which there is the best evidence for effectiveness and safety. In some cases, this may be the first medicine that is licensed for marketing; in other instances, subsequently licensed compounds may be safer or more effective. Where there is no difference in terms of efficacy and safety data, the listed medicine should be the one that is generally available at the lowest price, based on international drug price information sources. Not all square boxes are applicable to medicine selection for children — see the second EMLc for details.

Therapeutic equivalence is indicated only on the basis of reviews of efficacy and safety and when consistent with WHO clinical guidelines. National lists should not use a similar symbol and should be specific in their final selection, which would depend on local availability and price.

The **ⓐ** symbol indicates that there is an age or weight restriction on use of the medicine; details for each medicine can be found in Table 1.1.

Where the **[c]** symbol is placed next to the complementary list it signifies that the medicine(s) require(s) specialist diagnostic or monitoring facilities, and/or specialist medical care, and/or specialist training for their use in children.

Where the **[c]** symbol is placed next to an individual medicine or strength of medicine it signifies that there is a specific indication for restricting its use to children.

The presence of an entry on the Essential Medicines List carries no assurance as to pharmaceutical quality. It is the responsibility of the relevant national or regional drug regulatory authority to ensure that each product is of appropriate pharmaceutical quality (including stability) and that, when relevant, different products are interchangeable.

For recommendations and advice concerning all aspects of the quality assurance of medicines see the WHO Medicines website [http://www.who.int/medicines/areas/quality\\_assurance](http://www.who.int/medicines/areas/quality_assurance).

Medicines and dosage forms are listed in alphabetical order within each section and there is no implication of preference for one form over another. Standard treatment guidelines should be consulted for information on appropriate dosage forms.

The main terms used for dosage forms in the Essential Medicines List can be found in Table 1.2.

Definitions of many of these terms and pharmaceutical quality requirements applicable to the different categories are published in the current edition of *The International Pharmacopoeia*  
<http://www.who.int/medicines/publications/pharmacopoeia>.

<b>1. ANAESTHETICS</b>	
<b>1.1 General anaesthetics and oxygen</b>	
<b>1.1.1 Inhalational medicines</b>	
halothane	<b>Inhalation.</b>
isoflurane	<b>Inhalation.</b>
nitrous oxide	<b>Inhalation.</b>
oxygen	<b>Inhalation</b> (medicinal gas).
<b>1.1.2 Injectable medicines</b>	
ketamine	<b>Injection:</b> 50 mg (as hydrochloride)/ mL in 10- mL vial.
propofol*	<b>Injection:</b> 10 mg/ mL; 20 mg/ mL. * Thiopental may be used as an alternative depending on local availability and cost.
<b>1.2 Local anaesthetics</b>	
<input type="checkbox"/> bupivacaine	<b>Injection:</b> 0.25%; 0.5% (hydrochloride) in vial. <b>Injection for spinal anaesthesia:</b> 0.5% (hydrochloride) in 4- mL ampoule to be mixed with 7.5% glucose solution.
<input type="checkbox"/> lidocaine	<b>Injection:</b> 1%; 2% (hydrochloride) in vial. <b>Injection for spinal anaesthesia:</b> 5% (hydrochloride) in 2- mL ampoule to be mixed with 7.5% glucose solution. <b>Topical forms:</b> 2% to 4% (hydrochloride).
lidocaine + epinephrine (adrenaline)	<b>Dental cartridge:</b> 2% (hydrochloride) + epinephrine 1:80 000. <b>Injection:</b> 1%; 2% (hydrochloride <b>or</b> sulfate) + epinephrine 1:200 000 in vial.
<i>Complementary List</i>	
<i>ephedrine</i>	<b>Injection:</b> 30 mg (hydrochloride)/ mL in 1- mL ampoule. (For use in spinal anaesthesia during delivery, to prevent hypotension).
<b>1.3 Preoperative medication and sedation for short-term procedures</b>	
atropine	<b>Injection:</b> 1 mg (sulfate) in 1- mL ampoule.
<input type="checkbox"/> midazolam	<b>Injection:</b> 1 mg/ mL. <b>Oral liquid:</b> 2 mg/ mL <b>[C]</b> . <b>Tablet:</b> 7.5 mg; 15 mg.
morphine	<b>Injection:</b> 10 mg (sulfate <b>or</b> hydrochloride) in 1- mL ampoule.

<b>2. MEDICINES FOR PAIN AND PALLIATIVE CARE</b>	
<b>2.1 Non-opioids and non-steroidal anti-inflammatory medicines (NSAIMs)</b>	
acetylsalicylic acid	<p><b>Suppository:</b> 50 mg to 150 mg.</p> <p><b>Tablet:</b> 100 mg to 500 mg.</p>
ibuprofen <b>[a]</b>	<p><b>Oral liquid:</b> 200 mg/5 mL.</p> <p><b>Tablet:</b> 200 mg; 400 mg; 600 mg.</p> <p><b>[a]</b> Not in children less than 3 months.</p>
paracetamol*	<p><b>Oral liquid:</b> 125 mg/5 mL.</p> <p><b>Suppository:</b> 100 mg.</p> <p><b>Tablet:</b> 100 mg to 500 mg.</p> <p>* Not recommended for anti-inflammatory use due to lack of proven benefit to that effect.</p>
<b>2.2 Opioid analgesics</b>	
codeine	<p><b>Tablet:</b> 30 mg (phosphate).</p>
<input type="checkbox"/> morphine*	<p><b>Granules (slow-release; to mix with water):</b> 20 mg – 200 mg (morphine sulfate).</p> <p><b>Injection:</b> 10 mg (morphine hydrochloride or morphine sulfate) in 1- mL ampoule.</p> <p><b>Oral liquid:</b> 10 mg (morphine hydrochloride or morphine sulfate)/5 mL.</p> <p><b>Tablet (slow release):</b> 10 mg–200mg (morphine hydrochloride or morphine sulfate).</p> <p><b>Tablet (immediate release):</b> 10 mg (morphine sulfate).</p> <p>* Alternatives limited to hydromorphone and oxycodone</p>
<b>2.3 Medicines for other common symptoms in palliative care</b>	
amitriptyline	<p><b>Tablet:</b> 10 mg; 25 mg; 75 mg.</p>
cyclizine <b>[c]</b>	<p><b>Injection:</b> 50 mg/ mL.</p> <p><b>Tablet:</b> 50 mg.</p>
dexamethasone	<p><b>Injection:</b> 4 mg/ mL in 1- mL ampoule (as disodium phosphate salt).</p> <p><b>Oral liquid:</b> 2 mg/5 mL.</p> <p><b>Tablet:</b> 2 mg <b>[c]</b>; 4 mg.</p>

diazepam	<b>Injection:</b> 5 mg/ mL. <b>Oral liquid:</b> 2 mg/5 mL. <b>Rectal solution:</b> 2.5 mg; 5 mg; 10 mg. <b>Tablet:</b> 5 mg; 10 mg.
docusate sodium	<b>Capsule:</b> 100 mg. <b>Oral liquid:</b> 50 mg/5 mL.
fluoxetine <b>a</b>	<b>Solid oral dosage form:</b> 20 mg (as hydrochloride). <b>a</b> >8 years.
haloperidol	<b>Injection:</b> 5 mg in 1- mL ampoule. <b>Oral liquid:</b> 2 mg/ mL. <b>Solid oral dosage form:</b> 0.5 mg; 2mg; 5 mg.
hyoscine butylbromide	<b>Injection:</b> 20 mg/ mL.
hyoscine hydrobromide <b>[c]</b>	<b>Injection:</b> 400 micrograms/ mL; 600 micrograms/ mL. <b>Transdermal patches:</b> 1 mg/72 hours.
lactulose <b>[c]</b>	<b>Oral liquid:</b> 3.1–3.7 g/5 mL.
loperamide	<b>Solid oral dosage form:</b> 2 mg.
metoclopramide	<b>Injection:</b> 5 mg (hydrochloride)/mL in 2-mL ampoule. <b>Oral liquid:</b> 5 mg/5 mL. <b>Solid oral form:</b> 10 mg (hydrochloride).
midazolam	<b>Injection:</b> 1 mg/ mL; 5 mg/ mL. <b>Solid oral dosage form:</b> 7.5 mg; 15 mg. <b>Oral liquid:</b> 2mg/ mL <b>[c]</b> .
ondansetron <b>[c]</b> <b>a</b>	<b>Injection:</b> 2 mg base/ mL in 2- mL ampoule (as hydrochloride). <b>Oral liquid:</b> 4 mg base/5 mL. <b>Solid oral dosage form:</b> Eq 4 mg base; Eq 8 mg base. <b>a</b> >1 month.
senna	<b>Oral liquid:</b> 7.5 mg/5 mL.
<b>3. ANTIALLERGICS AND MEDICINES USED IN ANAPHYLAXIS</b>	
dexamethasone	<b>Injection:</b> 4 mg/ mL in 1- mL ampoule (as disodium phosphate salt).
epinephrine (adrenaline)	<b>Injection:</b> 1 mg (as hydrochloride <b>or</b> hydrogen tartrate) in 1- mL ampoule.
hydrocortisone	<b>Powder for injection:</b> 100 mg (as sodium succinate) in vial.

□ loratadine *	<p><b>Oral liquid:</b> 1 mg/ mL.</p> <p><b>Tablet:</b> 10 mg.</p> <p><i>*There may be a role for sedating antihistamines for limited indications (EMLc).</i></p>
□ prednisolone	<p><b>Oral liquid:</b> 5 mg/ mL <b>[c]</b>.</p> <p><b>Tablet:</b> 5 mg; 25 mg.</p>
<b>4. ANTIDOTES AND OTHER SUBSTANCES USED IN POISONINGS</b>	
<b>4.1 Non-specific</b>	
charcoal, activated	<b>Powder.</b>
<b>4.2 Specific</b>	
acetylcysteine	<p><b>Injection:</b> 200 mg/ mL in 10- mL ampoule.</p> <p><b>Oral liquid:</b> 10% <b>[c]</b>; 20% <b>[c]</b>.</p>
atropine	<b>Injection:</b> 1 mg (sulfate) in 1- mL ampoule.
calcium gluconate	<b>Injection:</b> 100 mg/ mL in 10- mL ampoule.
methylthioninium chloride (methylene blue)	<b>Injection:</b> 10 mg/ mL in 10- mL ampoule.
naloxone	<b>Injection:</b> 400 micrograms (hydrochloride) in 1- mL ampoule.
penicillamine	<b>Solid oral dosage form:</b> 250 mg.
potassium ferric hexacyano-ferrate(II) - 2H <sub>2</sub> O(Prussian blue)	<b>Powder for oral administration.</b>
sodium nitrite	<b>Injection:</b> 30 mg/ mL in 10- mL ampoule.
sodium thiosulfate	<b>Injection:</b> 250 mg/ mL in 50- mL ampoule.
<b>Complementary List</b>	
<i>deferoxamine</i>	<b>Powder for injection:</b> 500 mg (mesilate) in vial.
<i>dimercaprol</i>	<b>Injection in oil:</b> 50 mg/ mL in 2- mL ampoule.
<i>fomepizole</i>	<b>Injection:</b> 5 mg/ mL (sulfate) in 20- mL ampoule or 1 g/ mL (base) in 1.5- mL ampoule.
<i>sodium calcium edetate</i>	<b>Injection:</b> 200 mg/ mL in 5- mL ampoule.
<i>succimer</i>	<b>Solid oral dosage form:</b> 100 mg.
<b>5. ANTICONVULSANTS/ANTIEPILEPTICS</b>	
carbamazepine	<p><b>Oral liquid:</b> 100 mg/5 mL.</p> <p><b>Tablet (chewable):</b> 100 mg; 200 mg.</p> <p><b>Tablet (scored):</b> 100 mg; 200 mg.</p>
diazepam	<b>Gel or rectal solution:</b> 5 mg/ mL in 0.5 mL; 2- mL; 4- mL tubes.

□ lorazepam	<b>Parenteral formulation:</b> 2 mg/ mL in 1- mL ampoule; 4 mg/ mL in 1- mL ampoule.
magnesium sulfate*	<b>Injection:</b> 0.5g/ mL in 2- mL ampoule (equivalent to 1 g in 2 mL; 50% weight/volume); 0.5g/ mL in 10- mL ampoule (equivalent to 5 g in 10 mL; 50% weight/volume).  * For use in eclampsia and severe pre-eclampsia and not for other convulsant disorders.
midazolam	<b>Solution for oromucosal administration:</b> 5 mg/mL; 10 mg/mL  <b>Ampoule*:</b> 1 mg/ mL; 10 mg/mL  *for buccal administration when solution for oromucosal administration is not available
phenobarbital	<b>Injection:</b> 200 mg/ mL (sodium). <b>Oral liquid:</b> 15 mg/5 mL. <b>Tablet:</b> 15 mg to 100 mg.
phenytoin	<b>Injection:</b> 50 mg/ mL in 5- mL vial (sodium salt). <b>Oral liquid:</b> 25 mg to 30 mg/5 mL.* <b>Solid oral dosage form:</b> 25 mg; 50 mg; 100 mg (sodium salt). <b>Tablet (chewable):</b> 50 mg.  * The presence of both 25 mg/5 mL and 30 mg/5 mL strengths on the same market would cause confusion in prescribing and dispensing and should be avoided.
valproic acid (sodium valproate)	<b>Oral liquid:</b> 200 mg/5 mL. <b>Tablet (crushable):</b> 100 mg. <b>Tablet (enteric-coated):</b> 200 mg; 500 mg (sodium valproate).
<b>Complementary List</b>	
<i>ethosuximide</i>	<b>Capsule:</b> 250 mg. <b>Oral liquid:</b> 250 mg/5 mL.
<i>valproic acid (sodium valproate)</i>	<b>Injection:</b> 100 mg/ mL in 4- mL ampoule; 100 mg/ mL in 10- mL ampoule.
<b>6. ANTI-INFECTIVE MEDICINES</b>	
<b>6.1 Anthelmintics</b>	
<b>6.1.1 Intestinal anthelmintics</b>	
albendazole	<b>Tablet (chewable):</b> 400 mg.

levamisole	<b>Tablet:</b> 50 mg; 150 mg (as hydrochloride).
mebendazole	<b>Tablet (chewable):</b> 100 mg; 500 mg.
niclosamide	<b>Tablet (chewable):</b> 500 mg.
praziquantel	<b>Tablet:</b> 150 mg; 600 mg.
pyrantel	<b>Oral liquid:</b> 50 mg (as embonate <b>or</b> pamoate)/ mL. <b>Tablet (chewable):</b> 250 mg (as embonate <b>or</b> pamoate).
<b>6.1.2 Antifilarials</b>	
albendazole	<b>Tablet (chewable):</b> 400 mg.
diethylcarbamazine	<b>Tablet:</b> 50 mg; 100 mg (dihydrogen citrate).
ivermectin	<b>Tablet (scored):</b> 3 mg.
<b>6.1.3 Antischistosomes and other antitrematode medicines</b>	
praziquantel	<b>Tablet:</b> 600 mg.
triclabendazole	<b>Tablet:</b> 250 mg.
<b>Complementary List</b>	
<i>oxamniquine*</i>	<b>Capsule:</b> 250 mg. <b>Oral liquid:</b> 250 mg/5 mL. <i>* Oxamniquine is listed for use when praziquantel treatment fails.</i>
<b>6.2 Antibacterials</b>	
<b>6.2.1 Beta-lactam medicines</b>	
amoxicillin	<b>Powder for oral liquid:</b> 125 mg (as trihydrate)/5 mL; 250 mg (as trihydrate)/5 mL <b>[c]</b> . <b>Solid oral dosage form:</b> 250 mg; 500 mg (as trihydrate).
amoxicillin + clavulanic acid	<b>Oral liquid:</b> 125 mg amoxicillin + 31.25 mg clavulanic acid/5 mL AND 250 mg amoxicillin + 62.5 mg clavulanic acid/5 mL <b>[c]</b> . <b>Tablet:</b> 500 mg (as trihydrate) + 125 mg (as potassium salt).
ampicillin	<b>Powder for injection:</b> 500 mg; 1 g (as sodium salt) in vial.
benzathine benzylpenicillin	<b>Powder for injection:</b> 900 mg benzylpenicillin (= 1.2 million IU) in 5- mL vial <b>[c]</b> ; 1.44 g benzylpenicillin (= 2.4 million IU) in 5- mL vial.
benzylpenicillin	<b>Powder for injection:</b> 600 mg (= 1 million IU); 3 g (= 5 million IU) (sodium <b>or</b> potassium salt) in vial.



cefalexin [c]	<b>Powder for reconstitution with water:</b> 125 mg/5 mL; 250 mg/5 mL (anhydrous). <b>Solid oral dosage form:</b> 250 mg (as monohydrate).
<input type="checkbox"/> cefazolin* [a]	<b>Powder for injection:</b> 1 g (as sodium salt) in vial. * For surgical prophylaxis. [a] >1 month.
cefixime*	<b>Capsule:</b> 400 mg (as trihydrate). * Listed only for single-dose treatment of uncomplicated anogenital gonorrhoea.
ceftriaxone* [a]	<b>Powder for injection:</b> 250 mg; 1 g (as sodium salt) in vial. * Do not administer with calcium and avoid in infants with hyperbilirubinaemia. [a] >41 weeks corrected gestational age.
<input type="checkbox"/> cloxacillin	<b>Capsule:</b> 500 mg; 1 g (as sodium salt). <b>Powder for injection:</b> 500 mg (as sodium salt) in vial. <b>Powder for oral liquid:</b> 125 mg (as sodium salt)/5 mL.
phenoxymethylpenicillin	<b>Powder for oral liquid:</b> 250 mg (as potassium salt)/5 mL. <b>Tablet:</b> 250 mg (as potassium salt).
procaine benzylpenicillin*	<b>Powder for injection:</b> 1 g (=1 million IU); 3 g (=3 million IU) in vial. * Procaine benzylpenicillin is not recommended as first-line treatment for neonatal sepsis except in settings with high neonatal mortality, when given by trained health workers in cases where hospital care is not achievable.
<b>Complementary List</b>	
cefotaxime* [c]	<b>Powder for injection:</b> 250 mg per vial (as sodium salt). * 3rd generation cephalosporin of choice for use in hospitalized neonates.
ceftazidime	<b>Powder for injection:</b> 250 mg or 1 g (as pentahydrate) in vial.

<p><i>imipenem* + cilastatin*</i></p>	<p><b>Powder for injection:</b> 250 mg (as monohydrate) + 250 mg (as sodium salt); 500 mg (as monohydrate) + 500 mg (as sodium salt) in vial.</p> <p>* Listed only for the treatment of life-threatening hospital-based infection due to suspected or proven multidrug-resistant infection.</p> <p>Meropenem is indicated for the treatment of meningitis and is licensed for use in children over the age of 3 months.</p>
<p><b>6.2.2 Other antibacterials</b></p>	
<p>azithromycin*</p>	<p><b>Capsule:</b> 250 mg; 500 mg (anhydrous).</p> <p><b>Oral liquid:</b> 200 mg/5 mL.</p> <p>* Only listed for single-dose treatment of genital <i>Chlamydia trachomatis</i> and of trachoma.</p>
<p>chloramphenicol</p>	<p><b>Capsule:</b> 250 mg.</p> <p><b>Oily suspension for injection*:</b> 0.5 g (as sodium succinate)/ mL in 2- mL ampoule.</p> <p>* Only for the presumptive treatment of epidemic meningitis in children older than 2 years.</p> <p><b>Oral liquid:</b> 150 mg (as palmitate)/5 mL.</p> <p><b>Powder for injection:</b> 1 g (sodium succinate) in vial.</p>
<p><input type="checkbox"/> ciprofloxacin*</p>	<p><b>Oral liquid:</b> 250 mg/5 mL (anhydrous) <b>[c]</b>.</p> <p><b>Solution for IV infusion:</b> 2 mg/ mL (as hyclate) <b>[c]</b>.</p> <p><b>Tablet:</b> 250 mg (as hydrochloride).</p> <p>* Square box applies to adults only.</p>
<p>clarithromycin*</p>	<p><b>Solid oral dosage form:</b> 500 mg.</p> <p>* For use in combination regimens for eradication of <i>H. Pylori</i> in adults.</p>
<p>doxycycline <input type="checkbox"/> <b>a</b></p>	<p><b>Oral liquid:</b> 25 mg/5 mL <b>[c]</b>; 50 mg/5 mL (anhydrous) <b>[c]</b>.</p> <p><b>Solid oral dosage form:</b> 50 mg <b>[c]</b>; 100 mg (as hyclate).</p> <p><b>a</b> Use in children &lt;8 years only for life-threatening infections when no alternative exists.</p>
<p><input type="checkbox"/> erythromycin</p>	<p><b>Powder for injection:</b> 500 mg (as lactobionate) in vial.</p> <p><b>Powder for oral liquid:</b> 125 mg/5 mL (as stearate or estolate or ethyl succinate).</p> <p><b>Solid oral dosage form:</b> 250 mg (as stearate or estolate or ethyl succinate).</p>

□ gentamicin	<b>Injection:</b> 10 mg; 40 mg (as sulfate)/ mL in 2- mL vial.
□ metronidazole	<b>Injection:</b> 500 mg in 100- mL vial. <b>Oral liquid:</b> 200 mg (as benzoate)/5 mL. <b>Suppository:</b> 500 mg; 1 g. <b>Tablet:</b> 200 mg to 500 mg.
nitrofurantoin	<b>Oral liquid:</b> 25 mg/5 mL <b>[c]</b> . <b>Tablet:</b> 100 mg.
spectinomycin	<b>Powder for injection:</b> 2 g (as hydrochloride) in vial.
sulfamethoxazole + trimethoprim	<b>Injection:</b> 80 mg + 16 mg/ mL in 5- mL ampoule; 80 mg + 16 mg/ mL in 10- mL ampoule. <b>Oral liquid:</b> 200 mg + 40 mg/5 mL. <b>Tablet:</b> 100 mg + 20 mg; 400 mg + 80 mg; 800 mg + 160 mg.
trimethoprim <b>[a]</b>	<b>Oral liquid:</b> 50 mg/5 mL <b>[c]</b> . <b>Tablet:</b> 100 mg; 200 mg. <b>[a]</b> >6 months.
<b>Complementary List</b>	
clindamycin	<b>Capsule:</b> 150 mg (as hydrochloride). <b>Injection:</b> 150 mg (as phosphate)/ mL. <b>Oral liquid:</b> 75 mg/5 mL (as palmitate) <b>[c]</b> .
vancomycin	<b>Powder for injection:</b> 250 mg (as hydrochloride) in vial.
<b>6.2.3 Antileprosy medicines</b>	
Medicines used in the treatment of leprosy should never be used except in combination. Combination therapy is essential to prevent the emergence of drug resistance. Colour-coded blister packs (MDT blister packs) containing standard two-medicine (paucibacillary leprosy) or three-medicine (multibacillary leprosy) combinations for adult and childhood leprosy should be used. MDT blister packs can be supplied free of charge through WHO.	
clofazimine	<b>Capsule:</b> 50 mg; 100 mg.
dapsone	<b>Tablet:</b> 25 mg; 50 mg; 100 mg.
rifampicin	<b>Solid oral dosage form:</b> 150 mg; 300 mg.
<b>6.2.4 Antituberculosis medicines</b>	
WHO recommends and endorses the use of fixed-dose combinations and the development of appropriate new fixed-dose combinations, including modified dosage forms, non-refrigerated products and paediatric dosage forms of assured pharmaceutical quality.	

ethambutol	<b>Oral liquid:</b> 25 mg/ mL <b>[c]</b> . <b>Tablet:</b> 100 mg to 400 mg (hydrochloride).
ethambutol + isoniazid	<b>Tablet:</b> 400 mg + 150 mg.
ethambutol + isoniazid + pyrazinamide + rifampicin	<b>Tablet:</b> 275 mg + 75 mg + 400 mg + 150 mg.
ethambutol + isoniazid + rifampicin	<b>Tablet:</b> 275 mg + 75 mg + 150 mg.
isoniazid	<b>Oral liquid:</b> 50 mg/5 mL <b>[c]</b> . <b>Tablet:</b> 100 mg to 300 mg. <b>Tablet (scored):</b> 50 mg.
isoniazid + pyrazinamide + rifampicin	<b>Tablet:</b> 75 mg + 400 mg + 150 mg. 150 mg + 500 mg + 150 mg ( <b>For intermittent use three times weekly</b> ).
isoniazid + rifampicin	<b>Tablet:</b> 75 mg + 150 mg; 150 mg + 300 mg. 60 mg + 60 mg ( <b>For intermittent use three times weekly</b> ). 150 mg + 150 mg ( <b>For intermittent use three times weekly</b> ).
pyrazinamide	<b>Oral liquid:</b> 30 mg/ mL <b>[c]</b> . <b>Tablet:</b> 400 mg. <b>Tablet (dispersible):</b> 150 mg. <b>Tablet (scored):</b> 150 mg.
rifabutin	<b>Capsule:</b> 150 mg.* * For use only in patients with HIV receiving protease inhibitors.
rifampicin	<b>Oral liquid:</b> 20 mg/ mL <b>[c]</b> . <b>Solid oral dosage form:</b> 150 mg; 300 mg.
rifapentine*	<b>Tablet:</b> 150 mg *For treatment of latent TB infection (LTBI) only
streptomycin	<b>Powder for injection:</b> 1 g (as sulfate) in vial.
<i>Complementary List</i>	
<i>Reserve second-line drugs for the treatment of multidrug-resistant tuberculosis (MDR-TB) should be used in specialized centres adhering to WHO standards for TB control.</i>	
<i>amikacin</i>	<b>Powder for injection:</b> 100 mg; 500 mg; 1 g (as sulfate) in vial.
<i>bedaquiline</i>	<b>Tablet:</b> 100 mg

<i>capreomycin</i>	<b>Powder for injection:</b> 1 g (as sulfate) in vial.
<i>cycloserine*</i>	<b>Solid oral dosage form:</b> 250 mg. *Terizidone may be an alternative
<i>delamanid</i>	<b>Tablet:</b> 50 mg
<i>ethionamide*</i>	<b>Tablet:</b> 125 mg; 250 mg. *Protionamide may be an alternative.
<i>kanamycin</i>	<b>Powder for injection:</b> 1 g (as sulfate) in vial.
<i>levofloxacin*</i>	<b>Tablet:</b> 250mg; 500 mg; 750 mg. * Ofloxacin and moxifloxacin may be alternatives based on availability and programme considerations.
<i>linezolid</i>	<b>Injection for intravenous administration:</b> 2 mg/ mL in 300 mL bag <b>Powder for oral liquid:</b> 100 mg/5 mL, <b>Tablet:</b> 400 mg; 600 mg
<i>p-aminosalicylic acid</i>	<b>Granules:</b> 4 g in sachet. <b>Tablet:</b> 500 mg.
<i>streptomycin [c]</i>	<b>Powder for injection:</b> 1 g (as sulfate) in vial.
<b>6.3 Antifungal medicines</b>	
amphotericin B	<b>Powder for injection:</b> 50 mg in vial (as sodium deoxycholate <b>or</b> liposomal complex).
clotrimazole	<b>Vaginal cream:</b> 1%; 10%. <b>Vaginal tablet:</b> 100 mg; 500 mg.
<input type="checkbox"/> fluconazole	<b>Capsule:</b> 50 mg. <b>Injection:</b> 2 mg/ mL in vial. <b>Oral liquid:</b> 50 mg/5 mL.
flucytosine	<b>Capsule:</b> 250 mg. <b>Infusion:</b> 2.5 g in 250 mL.
griseofulvin	<b>Oral liquid:</b> 125 mg/5 mL <b>[c]</b> . <b>Solid oral dosage form:</b> 125 mg; 250 mg.
nystatin	<b>Lozenge:</b> 100 000 IU. <b>Oral liquid:</b> 50 mg/5 mL <b>[c]</b> ; 100 000 IU/ mL <b>[c]</b> . <b>Pessary:</b> 100 000 IU. <b>Tablet:</b> 100 000 IU; 500 000 IU.
<b>Complementary List</b>	
<i>potassium iodide</i>	<b>Saturated solution.</b>

<b>6.4 Antiviral medicines</b>	
<b>6.4.1 Antiherpes medicines</b>	
□ aciclovir	<p><b>Oral liquid:</b> 200 mg/5 mL <b>[c]</b>.</p> <p><b>Powder for injection:</b> 250 mg (as sodium salt) in vial.</p> <p><b>Tablet:</b> 200 mg.</p>
<b>6.4.2 Antiretrovirals</b>	
<p>Based on current evidence and experience of use, medicines in the following three classes of antiretrovirals are included as essential medicines for treatment and prevention of HIV (prevention of mother-to-child transmission and post-exposure prophylaxis). WHO emphasizes the importance of using these products in accordance with global and national guidelines. WHO recommends and endorses the use of fixed-dose combinations and the development of appropriate new fixed-dose combinations, including modified dosage forms, non-refrigerated products and paediatric dosage forms of assured pharmaceutical quality.</p> <p>Scored tablets can be used in children and therefore can be considered for inclusion in the listing of tablets, provided that adequate quality products are available.</p>	
<b>6.4.2.1 Nucleoside/Nucleotide reverse transcriptase inhibitors</b>	
abacavir (ABC)	<p><b>Oral liquid:</b> 100 mg (as sulfate)/5 mL.</p> <p><b>Tablet:</b> 300 mg (as sulfate).</p>
lamivudine (3TC)	<p><b>Oral liquid:</b> 50 mg/5 mL.</p> <p><b>Tablet:</b> 150 mg.</p>
stavudine (d4T)	<p><b>Capsule:</b> 15 mg; 20 mg; 30 mg.</p> <p><b>Powder for oral liquid:</b> 5 mg/5 mL.</p>
tenofovir disoproxil fumarate (TDF)	<p><b>Tablet:</b> 300 mg (tenofovir disoproxil fumarate – equivalent to 245 mg tenofovir disoproxil).</p>
zidovudine (ZDV or AZT)	<p><b>Capsule:</b> 100 mg; 250 mg.</p> <p><b>Oral liquid:</b> 50 mg/5 mL.</p> <p><b>Solution for IV infusion injection:</b> 10 mg/ mL in 20- mL vial.</p> <p><b>Tablet:</b> 300 mg.</p>
<b>6.4.2.2 Non-nucleoside reverse transcriptase inhibitors</b>	
efavirenz (EFV or EFZ) <b>[a]</b>	<p><b>Capsule:</b> 50 mg; 100 mg; 200 mg.</p> <p><b>Tablet:</b> 200 mg (scored); 600 mg.</p> <p><b>[a]</b> &gt;3 years <b>or</b> &gt;10 kg weight.</p>
nevirapine (NVP)	<p><b>Oral liquid:</b> 50 mg/5 mL.</p> <p><b>Tablet:</b> 50 mg (dispersible); 200 mg.</p>
<b>6.4.2.3 Protease inhibitors</b>	

## WHO Model List

Selection of protease inhibitor(s) from the Model List will need to be determined by each country after consideration of international and national treatment guidelines and experience. Ritonavir is recommended for use in combination as a pharmacological booster, and not as an antiretroviral in its own right. All other protease inhibitors should be used in boosted forms (e.g. with ritonavir).	
atazanavir <b>[a]</b>	<b>Solid oral dosage form:</b> 100 mg; 150 mg; 300 mg (as sulfate). <b>[a]</b> >25 kg.
darunavir <b>[a]</b>	<b>Tablet:</b> 75 mg; 400 mg; 600 mg; 800 mg <b>[a]</b> >3 years
lopinavir + ritonavir (LPV/r)	<b>Oral liquid:</b> 400 mg + 100 mg/5 mL. <b>Tablet (heat stable):</b> 100 mg + 25 mg; 200 mg + 50 mg.
ritonavir	<b>Oral liquid:</b> 400 mg/5 mL. <b>Tablet (heat stable):</b> 25 mg; 100 mg.
saquinavir (SQV) <b>[a]</b>	<b>Solid oral dosage form:</b> 200 mg; 500 mg (as mesilate). <b>[a]</b> >25 kg.
<b>FIXED-DOSE COMBINATIONS</b>	
abacavir + lamivudine	<b>Tablet (dispersible, scored):</b> 60 mg (as sulfate) + 30 mg
efavirenz + emtricitabine + tenofovir	<b>Tablet:</b> 600 mg + 200 mg + 300 mg (disoproxil fumarate equivalent to 245 mg tenofovir disoproxil).
emtricitabine + tenofovir	<b>Tablet:</b> 200 mg + 300 mg (disoproxil fumarate equivalent to 245 mg tenofovir disoproxil).
lamivudine + nevirapine + stavudine	<b>Tablet:</b> 150 mg + 200 mg + 30 mg. <b>Tablet (dispersible):</b> 30 mg + 50 mg + 6 mg <b>[c]</b> .
lamivudine + nevirapine + zidovudine	<b>Tablet:</b> 30 mg + 50 mg + 60 mg <b>[c]</b> ; 150 mg + 200 mg + 300 mg.
lamivudine + zidovudine	<b>Tablet:</b> 30 mg + 60 mg <b>[c]</b> ; 150 mg + 300 mg.
<b>6.4.3 Other antivirals</b>	
oseltamivir*	<b>Capsule:</b> 30 mg; 45 mg; 75 mg (as phosphate). <b>Oral powder:</b> 12 mg/ mL. * potentially severe or complicated illness due to confirmed or suspected influenza virus infection in accordance with WHO treatment guidelines.

ribavirin*	<p><b>Injection for intravenous administration:</b> 800 mg and 1 g in 10- mL phosphate buffer solution.</p> <p><b>Solid oral dosage form:</b> 200 mg; 400 mg; 600 mg.</p> <p>* For the treatment of viral haemorrhagic fevers</p>
valganciclovir*	<p><b>Tablet:</b> 450 mg.</p> <p>*For the treatment of cytomegalovirus retinitis (CMV).</p>
<b>6.4.4 Antihepatitis medicines</b>	
<b>6.4.4.1 Medicines for hepatitis B</b>	
<b>6.4.4.1.1 Nucleoside/Nucleotide reverse transcriptase inhibitors</b>	
entecavir	<p><b>Oral liquid:</b> 0.05 mg/ mL</p> <p><b>Tablet:</b> 0.5 mg; 1 mg</p>
tenofovir disoproxil fumarate (TDF)	<b>Tablet:</b> 300 mg (tenofovir disoproxil fumarate – equivalent to 245 mg tenofovir disoproxil).
<b>6.4.4.2 Medicines for hepatitis C</b>	
Based on current evidence, medicines in the following classes of direct acting antiviral medicines are included as essential medicines for treatment of hepatitis C virus infection. WHO guidelines recommend specific combination therapy utilising medicines from different classes. [\url]	
<b>6.4.4.2.1 Nucleotide polymerase inhibitors</b>	
sofosbuvir	<b>Tablet:</b> 400 mg
<b>6.4.4.2.2 Protease inhibitors</b>	
simeprevir	<b>Capsule</b> 150 mg
<b>6.4.4.2.3 NS5A inhibitors</b>	
daclatasvir	<b>Tablet:</b> 30 mg (as hydrochloride)
<b>6.4.4.2.4 Non-nucleoside polymerase inhibitors</b>	
dasabuvir	<b>Tablet:</b> 250 mg
<b>6.4.4.2.5 Other antivirals</b>	
ribavirin*	<p><b>Injection for intravenous administration:</b> 800 mg and 1 g in 10- mL phosphate buffer solution.</p> <p><b>Solid oral dosage form:</b> 200 mg; 400 mg; 600 mg.</p> <p>* For the treatment of hepatitis C, in combination with peginterferon and/or direct acting anti-viral medicines</p>
<i>Complementary List</i>	



pegylated interferon alfa (2a or 2b) *	<b>Vial or prefilled syringe:</b> 180 micrograms (peginterferon alfa-2a), 80 microgram, 100 microgram (peginterferon alfa-2b). * To be used in combination with ribavirin.
<b>FIXED-DOSE COMBINATIONS</b>	
Alternative combinations of DAAs from different pharmacological classes are possible	
ledipasvir + sofosbuvir	<b>Tablet:</b> 90 mg + 400 mg.
ombitasvir + paritaprevir + ritonavir	<b>Tablet:</b> 12.5 mg + 75 mg + 50 mg
<b>6.5 Antiprotozoal medicines</b>	
<b>6.5.1 Antiamoebic and anti giardiasis medicines</b>	
diloxanide <input type="checkbox"/> <b>a</b>	<b>Tablet:</b> 500 mg (furoate). <b>a</b> >25 kg.
<input type="checkbox"/> metronidazole	<b>Injection:</b> 500 mg in 100- mL vial. <b>Oral liquid:</b> 200 mg (as benzoate)/5 mL. <b>Tablet:</b> 200 mg to 500 mg.
<b>6.5.2 Antileishmaniasis medicines</b>	
amphotericin B	<b>Powder for injection:</b> 50 mg in vial (as sodium deoxycholate or liposomal complex).
miltefosine	<b>Solid oral dosage form:</b> 10 mg; 50 mg.
paromomycin	<b>Solution for intramuscular injection:</b> 750 mg of paromomycin base (as the sulfate).
sodium stibogluconate or meglumine antimoniate	<b>Injection:</b> 100 mg/ mL, 1 vial = 30 mL or 30%, equivalent to approximately 8.1% antimony (pentavalent) in 5- mL ampoule.
<b>6.5.3 Antimalarial medicines</b>	
<b>6.5.3.1 For curative treatment</b>	
Medicines for the treatment of <i>P. falciparum</i> malaria cases should be used in combination. The list currently recommends combinations according to treatment guidelines. WHO recognizes that not all of the fixed dose combinations (FDCs) in the WHO treatment guidelines exist, and encourages their development and rigorous testing. WHO also encourages development and testing of rectal dosage formulations.	
amodiaquine*	<b>Tablet:</b> 153 mg or 200 mg (as hydrochloride). * To be used in combination with artesunate 50 mg.
artemether*	<b>Oily injection:</b> 80 mg/ mL in 1- mL ampoule. * For use in the management of severe malaria.

<p>artemether + lumefantrine*</p>	<p><b>Tablet:</b> 20 mg + 120 mg. <b>Tablet (dispersible):</b> 20 mg + 120 mg [C]. * Not recommended in the first trimester of pregnancy <b>or</b> in children below 5 kg.</p>
<p>artesunate*</p>	<p><b>Injection:</b> ampoules, containing 60 mg anhydrous artesunic acid with a separate ampoule of 5% sodium bicarbonate solution. For use in the management of severe malaria. <b>Rectal dosage form:</b> 50 mg [C]; 200 mg capsules (for pre-referral treatment of severe malaria only; patients should be taken to an appropriate health facility for follow-up care) [C]. <b>Tablet:</b> 50 mg. * To be used in combination with either amodiaquine, mefloquine <b>or</b> sulfadoxine + pyrimethamine.</p>
<p>artesunate + amodiaquine*</p>	<p><b>Tablet:</b> 25 mg + 67.5 mg; 50 mg + 135 mg; 100 mg + 270 mg. * Other combinations that deliver the target doses required such as 153 mg <b>or</b> 200 mg (as hydrochloride) with 50 mg artesunate can be alternatives.</p>
<p>artesunate + mefloquine</p>	<p><b>Tablet:</b> 25 mg + 55 mg; 100 mg + 220 mg.</p>
<p>chloroquine*</p>	<p><b>Oral liquid:</b> 50 mg (as phosphate <b>or</b> sulfate)/5 mL. <b>Tablet:</b> 100 mg; 150 mg (as phosphate <b>or</b> sulfate). * For use only for the treatment of <i>P.vivax</i> infection.</p>
<p>doxycycline*</p>	<p><b>Capsule:</b> 100 mg (as hydrochloride <b>or</b> hyclate). <b>Tablet (dispersible):</b> 100 mg (as monohydrate). * For use only in combination with quinine.</p>
<p>mefloquine*</p>	<p><b>Tablet:</b> 250 mg (as hydrochloride). * To be used in combination with artesunate 50 mg.</p>
<p>primaquine*</p>	<p><b>Tablet:</b> 7.5 mg; 15 mg (as diphosphate). * Only for use to achieve radical cure of <i>P.vivax</i> and <i>P.ovale</i> infections, given for 14 days.</p>

quinine*	<p><b>Injection:</b> 300 mg quinine hydrochloride/ mL in 2-mL ampoule.</p> <p><b>Tablet:</b> 300 mg (quinine sulfate) <b>or</b> 300 mg (quinine bisulfate).</p> <p>* For use only in the management of severe malaria, and should be used in combination with doxycycline.</p>
sulfadoxine + pyrimethamine*	<p><b>Tablet:</b> 500 mg + 25 mg.</p> <p>* Only in combination with artesunate 50 mg.</p>
<b>6.5.3.2 For prophylaxis</b>	
chloroquine*	<p><b>Oral liquid:</b> 50 mg (as phosphate <b>or</b> sulfate)/5 mL.</p> <p><b>Tablet:</b> 150 mg (as phosphate <b>or</b> sulfate).</p> <p>* For use only in central American regions, for <i>P.vivax</i> infections.</p>
doxycycline <b>a</b>	<p><b>Solid oral dosage form:</b> 100 mg (as hydrochloride <b>or</b> hyclate).</p> <p><b>a</b> &gt;8 years.</p>
mefloquine <b>a</b>	<p><b>Tablet:</b> 250 mg (as hydrochloride).</p> <p><b>a</b> &gt;5 kg <b>or</b> &gt;3 months.</p>
proguanil*	<p><b>Tablet:</b> 100 mg (as hydrochloride).</p> <p>* For use only in combination with chloroquine.</p>
<b>6.5.4 Antipneumocystosis and antitoxoplasmosis medicines</b>	
pyrimethamine	<b>Tablet:</b> 25 mg.
sulfadiazine	<b>Tablet:</b> 500 mg.
sulfamethoxazole + trimethoprim	<p><b>Injection:</b></p> <p>80 mg + 16 mg/ mL in 5- mL ampoule; 80 mg + 16 mg/ mL in 10- mL ampoule.</p> <p><b>Oral liquid:</b> 200 mg + 40 mg/5 mL <b>[c]</b>.</p> <p><b>Tablet:</b> 100 mg + 20 mg; 400 mg + 80 mg <b>[c]</b>.</p>
<b>Complementary List</b>	
pentamidine	<b>Tablet:</b> 200 mg; 300 mg (as isethionate).
<b>6.5.5 Antitrypanosomal medicines</b>	
<b>6.5.5.1 African trypanosomiasis</b>	
<b>Medicines for the treatment of 1<sup>st</sup> stage African trypanosomiasis</b>	
pentamidine*	<p><b>Powder for injection:</b> 200 mg (as isetionate) in vial.</p> <p>* To be used for the treatment of <i>Trypanosoma brucei gambiense</i> infection.</p>

suramin sodium*	<b>Powder for injection:</b> 1 g in vial. * To be used for the treatment of the initial phase of <i>Trypanosoma brucei rhodesiense</i> infection.
<b>Medicines for the treatment of 2<sup>nd</sup> stage African trypanosomiasis</b>	
eflornithine*	<b>Injection:</b> 200 mg (hydrochloride)/ mL in 100- mL bottle. * To be used for the treatment of <i>Trypanosoma brucei gambiense</i> infection.
melarsoprol	<b>Injection:</b> 3.6% solution, 5- mL ampoule (180 mg of active compound).
nifurtimox*	<b>Tablet:</b> 120 mg. * Only to be used in combination with eflornithine, for the treatment of <i>Trypanosoma brucei gambiense</i> infection.
<b>Complementary List [c]</b>	
melarsoprol	<b>Injection:</b> 3.6% solution in 5- mL ampoule (180 mg of active compound).
<b>6.5.5.2 American trypanosomiasis</b>	
benznidazole	<b>Tablet:</b> 12.5 mg [c]; 100 mg. <b>Tablet (scored):</b> 50 mg.
nifurtimox	<b>Tablet:</b> 30 mg; 120 mg; 250 mg.
<b>7. ANTIMIGRAINE MEDICINES</b>	
<b>7.1 For treatment of acute attack</b>	
acetylsalicylic acid	<b>Tablet:</b> 300 mg to 500 mg.
ibuprofen [c]	<b>Tablet:</b> 200 mg; 400 mg.
paracetamol	<b>Oral liquid:</b> 125 mg/5 mL [c]. <b>Tablet:</b> 300 mg to 500 mg.
<b>7.2 For prophylaxis</b>	
□ propranolol	<b>Tablet:</b> 20 mg; 40 mg (hydrochloride).
<b>8. ANTINEOPLASTICS AND IMMUNOSUPPRESSIVES</b>	
Medicines listed below should be used according to protocols for treatment of the diseases.	
<b>8.1 Immunosuppressive medicines</b>	
<b>Complementary List</b>	
azathioprine	<b>Powder for injection:</b> 100 mg (as sodium salt) in vial. <b>Tablet (scored):</b> 50 mg.

<i>ciclosporin</i>	<p><b>Capsule:</b> 25 mg.</p> <p><b>Concentrate for injection:</b> 50 mg/ mL in 1- mL ampoule for organ transplantation.</p>
<b>8.2 Cytotoxic and adjuvant medicines</b>	
<i>Complementary List</i>	
<i>all-trans retinoid acid (ATRA)</i>	<p><b>Capsule:</b> 10 mg.</p> <p>– acute promyelocytic leukemia.</p>
<i>allopurinol [c]</i>	<b>Tablet:</b> 100 mg; 300 mg.
<i>asparaginase</i>	<p><b>Powder for injection:</b> 10 000 IU in vial.</p> <p>– acute lymphoblastic leukemia.</p>
<i>bendamustine</i>	<p><b>Injection:</b> 45 mg/0.5 mL; 180 mg/2 mL.</p> <p>– chronic lymphocytic leukemia</p> <p>– follicular lymphoma</p>
<i>bleomycin</i>	<p><b>Powder for injection:</b> 15 mg (as sulfate) in vial.</p> <p>– Hodgkin lymphoma</p> <p>– Kaposi sarcoma</p> <p>– ovarian germ cell tumour</p> <p>– testicular germ cell tumour</p>
<i>calcium folinate</i>	<p><b>Injection:</b> 3 mg/ mL in 10- mL ampoule.</p> <p><b>Tablet:</b> 15 mg.</p> <p>– early stage colon cancer</p> <p>– early stage rectal cancer</p> <p>– gestational trophoblastic neoplasia</p> <p>– metastatic colorectal cancer</p> <p>– osteosarcoma</p> <p>– Burkitt lymphoma</p>
<i>capecitabine</i>	<p><b>Tablet:</b> 150 mg; 500 mg.</p> <p>– early stage colon cancer</p> <p>– early stage rectal cancer</p> <p>– metastatic breast cancer</p> <p>– metastatic colorectal cancer</p>
<i>carboplatin</i>	<p><b>Injection:</b> 50 mg/5 mL; 150 mg/15 mL; 450 mg/45 mL; 600 mg/60 mL.</p> <p>– early stage breast cancer</p> <p>– epithelial ovarian cancer</p> <p>– nasopharyngeal cancer</p> <p>– non-small cell lung cancer</p> <p>– osteosarcoma</p> <p>– retinoblastoma</p>

<i>chlorambucil</i>	<p><b>Tablet: 2 mg.</b></p> <ul style="list-style-type: none"> <li>– chronic lymphocytic leukemia.</li> </ul>
<i>cisplatin</i>	<p><b>Injection: 50 mg/50 mL; 100 mg/100 mL.</b></p> <ul style="list-style-type: none"> <li>– cervical cancer (as a radio-sensitizer)</li> <li>– head and neck cancer (as a radio-sensitizer)</li> <li>– nasopharyngeal cancer (as a radio-sensitizer)</li> <li>– non-small cell lung cancer</li> <li>– osteosarcoma</li> <li>– ovarian germ cell tumour</li> <li>– testicular germ cell tumour</li> </ul>
<i>cyclophosphamide</i>	<p><b>Powder for injection: 500 mg in vial.</b></p> <p><b>Tablet: 25 mg.</b></p> <ul style="list-style-type: none"> <li>– chronic lymphocytic leukemia</li> <li>– diffuse large B-cell lymphoma</li> <li>– early stage breast cancer</li> <li>– gestational trophoblastic neoplasia</li> <li>– Hodgkin lymphoma</li> <li>– follicular lymphoma</li> <li>– rhabdomyosarcoma</li> <li>– Ewing sarcoma</li> <li>– acute lymphoblastic leukemia</li> <li>– Burkitt lymphoma</li> <li>– metastatic breast cancer.</li> </ul>
<i>cytarabine</i>	<p><b>Powder for injection: 100 mg in vial.</b></p> <ul style="list-style-type: none"> <li>– acute myelogenous leukemia</li> <li>– acute lymphoblastic leukemia</li> <li>– acute promyelocytic leukemia</li> <li>– Burkitt lymphoma.</li> </ul>
<i>dacarbazine</i>	<p><b>Powder for injection: 100 mg in vial.</b></p> <ul style="list-style-type: none"> <li>– Hodgkin lymphoma</li> </ul>
<i>dactinomycin</i>	<p><b>Powder for injection: 500 micrograms in vial.</b></p> <ul style="list-style-type: none"> <li>– gestational trophoblastic neoplasia</li> <li>– rhabdomyosarcoma</li> <li>– Wilms tumour</li> </ul>
<i>daunorubicin</i>	<p><b>Powder for injection: 50 mg (hydrochloride) in vial.</b></p> <ul style="list-style-type: none"> <li>– acute myelogenous leukemia</li> <li>– acute promyelocytic leukemia</li> </ul>
<i>docetaxel</i>	<p><b>Injection: 20 mg/ mL; 40 mg/ mL.</b></p> <ul style="list-style-type: none"> <li>– early stage breast cancer</li> <li>– metastatic breast cancer</li> <li>– metastatic prostate cancer</li> </ul>

<p><i>doxorubicin</i></p>	<p><b>Powder for injection:</b> 10 mg; 50 mg (hydrochloride) in vial.</p> <ul style="list-style-type: none"> <li>– diffuse large B-cell lymphoma</li> <li>– early stage breast cancer</li> <li>– Hodgkin lymphoma</li> <li>– Kaposi sarcoma</li> <li>– follicular lymphoma</li> <li>– metastatic breast cancer</li> <li>– osteosarcoma</li> <li>– Ewing sarcoma</li> <li>– acute lymphoblastic leukemia</li> <li>– Wilms tumour</li> <li>– Burkitt lymphoma</li> </ul>
<p><i>etoposide</i></p>	<p><b>Capsule:</b> 100 mg.</p> <p><b>Injection:</b> 20 mg/ mL in 5- mL ampoule.</p> <ul style="list-style-type: none"> <li>– testicular germ cell tumour</li> <li>– gestational trophoblastic neoplasia</li> <li>– Hodgkin lymphoma</li> <li>– non-small cell lung cancer</li> <li>– ovarian germ cell tumour</li> <li>– retinoblastoma</li> <li>– Ewing sarcoma</li> <li>– acute lymphoblastic leukemia</li> <li>– Burkitt lymphoma</li> </ul>
<p><i>fludarabine</i></p>	<p><b>Powder for injection:</b> 50 mg (phosphate) in vial.</p> <p><b>Tablet:</b> 10 mg</p> <ul style="list-style-type: none"> <li>– chronic lymphocytic leukemia.</li> </ul>
<p><i>fluorouracil</i></p>	<p><b>Injection:</b> 50 mg/ mL in 5- mL ampoule.</p> <ul style="list-style-type: none"> <li>– early stage breast cancer</li> <li>– early stage colon cancer</li> <li>– early stage rectal cancer</li> <li>– metastatic colorectal cancer</li> <li>– nasopharyngeal cancer.</li> </ul>

<p><i>filgrastim</i></p>	<p><b>Injection:</b> 120 micrograms/0.2 mL; 300 micrograms/0.5 mL; 480 micrograms/0.8 mL in pre-filled syringe 300 micrograms/mL in 1- mL vial, 480 mg/1.6 mL in 1.6- mL vial.</p> <ul style="list-style-type: none"> <li>– As primary prophylaxis in patients at high risk for developing febrile neutropenia associated with myelotoxic chemotherapy.</li> <li>– As secondary prophylaxis for patients who have experienced neutropenia following prior myelotoxic chemotherapy</li> <li>– to facilitate administration of dose dense chemotherapy regimens</li> </ul>
<p><i>gemcitabine</i></p>	<p><b>Powder for injection:</b> 200 mg in vial, 1 g in vial.</p> <ul style="list-style-type: none"> <li>– epithelial ovarian cancer</li> <li>– non-small cell lung cancer</li> </ul>
<p><i>hydroxycarbamide</i></p>	<p><b>Solid oral dosage form:</b> 200 mg; 250 mg; 300 mg; 400 mg; 500 mg; 1 g.</p> <ul style="list-style-type: none"> <li>– chronic myeloid leukemia.</li> </ul>
<p><i>ifosfamide</i></p>	<p><b>Powder for injection:</b> 500 mg vial; 1-g vial; 2-g vial.</p> <ul style="list-style-type: none"> <li>– testicular germ cell tumour</li> <li>– ovarian germ cell tumour</li> <li>– osteosarcoma</li> <li>– rhabdomyosarcoma</li> <li>– Ewing sarcoma</li> </ul>
<p><i>imatinib</i></p>	<p><b>Tablet:</b> 100 mg; 400 mg.</p> <ul style="list-style-type: none"> <li>– chronic myeloid leukemia</li> <li>– gastrointestinal stromal tumour</li> </ul>
<p><i>irinotecan</i></p>	<p><b>Injection:</b> 40 mg/2 mL in 2- mL vial; 100 mg/5 mL in 5- mL vial; 500 mg/25 mL in 25- mL vial.</p> <ul style="list-style-type: none"> <li>– metastatic colorectal cancer.</li> </ul>
<p><i>mercaptopurine</i></p>	<p><b>Tablet:</b> 50 mg.</p> <ul style="list-style-type: none"> <li>– acute lymphoblastic leukemia</li> <li>– acute promyelocytic leukemia.</li> </ul>
<p><i>mesna</i></p>	<p><b>Injection:</b> 100 mg/ mL in 4- mL and 10- mL ampoules.</p> <p><b>Tablet:</b> 400 mg; 600 mg.</p> <ul style="list-style-type: none"> <li>– testicular germ cell tumour</li> <li>– ovarian germ cell tumour</li> <li>– osteosarcoma</li> <li>– rhabdomyosarcoma</li> <li>– Ewing sarcoma.</li> </ul>



<p><i>methotrexate</i></p>	<p><b>Powder for injection:</b> 50 mg (as sodium salt) in vial.</p> <p><b>Tablet:</b> 2.5 mg (as sodium salt).</p> <ul style="list-style-type: none"> <li>– early stage breast cancer</li> <li>– gestational trophoblastic neoplasia</li> <li>– osteosarcoma</li> <li>– acute lymphoblastic leukemia</li> <li>– acute promyelocytic leukemia</li> </ul>
<p><i>oxaliplatin</i></p>	<p><b>Injection:</b> 50 mg/10 mL in 10- mL vial; 100 mg/20 mL in 20- mL vial; 200 mg/40 mL in 40- mL vial.</p> <p><b>Powder for injection:</b> 50 mg, 100 mg in vial.</p> <ul style="list-style-type: none"> <li>– early stage colon cancer</li> <li>– metastatic colorectal cancer</li> </ul>
<p><i>paclitaxel</i></p>	<p><b>Powder for injection:</b> 6 mg/ mL.</p> <ul style="list-style-type: none"> <li>– epithelial ovarian cancer</li> <li>– early stage breast cancer</li> <li>– metastatic breast cancer</li> <li>– Kaposi sarcoma</li> <li>– nasopharyngeal cancer</li> <li>– non-small cell lung cancer</li> <li>– ovarian germ cell tumour</li> </ul>
<p><i>procarbazine</i></p>	<p><b>Capsule:</b> 50 mg (as hydrochloride).</p>
<p><i>rituximab</i></p>	<p><b>Injection:</b> 100 mg/10 mL in 10- mL vial; 500 mg/50 mL in 50- mL vial.</p> <ul style="list-style-type: none"> <li>– diffuse large B-cell lymphoma</li> <li>– chronic lymphocytic leukemia</li> <li>– follicular lymphoma.</li> </ul>
<p><i>tioguanine [c]</i></p>	<p><b>Solid oral dosage form:</b> 40 mg.</p> <ul style="list-style-type: none"> <li>– acute lymphoblastic leukemia.</li> </ul>
<p><i>trastuzumab</i></p>	<p><b>Dose form:</b></p> <ul style="list-style-type: none"> <li>– early stage HER2 positive breast cancer</li> <li>– metastatic HER2 positive breast cancer.</li> </ul>
<p><i>vinblastine</i></p>	<p><b>Powder for injection:</b> 10 mg (sulfate) in vial.</p> <ul style="list-style-type: none"> <li>– Hodgkin lymphoma</li> <li>– Kaposi sarcoma.</li> <li>– Testicular germ cell tumour</li> <li>– Ovarian germ cell tumour</li> </ul>

<p><i>vincristine</i></p>	<p><b>Powder for injection:</b> 1 mg; 5 mg (sulfate) in vial.</p> <ul style="list-style-type: none"> <li>– diffuse large B-cell lymphoma</li> <li>– gestational trophoblastic neoplasia</li> <li>– Hodgkin lymphoma</li> <li>– Kaposi sarcoma</li> <li>– follicular lymphoma</li> <li>– retinoblastoma</li> <li>– rhabdomyosarcoma</li> <li>– Ewing sarcoma</li> <li>– acute lymphoblastic leukemia</li> <li>– Wilms tumour</li> <li>– Burkitt lymphoma.</li> </ul>
<p><i>vinorelbine</i></p>	<p><b>Injection:</b> 10 mg/mL in 1- mL vial; 50 mg/5 mL in 5- mL vial.</p> <ul style="list-style-type: none"> <li>– non-small cell lung cancer</li> <li>– metastatic breast cancer</li> </ul>
<p><b>8.3 Hormones and antihormones</b></p>	
<p><i>Complementary List</i></p>	
<p><input type="checkbox"/> <i>anastrozole</i></p>	<p><b>Tablet:</b> 1 mg.</p> <ul style="list-style-type: none"> <li>– early stage breast cancer</li> <li>– metastatic breast cancer.</li> </ul>
<p><input type="checkbox"/> <i>bicalutamide</i></p>	<p><b>Tablet:</b> 50 mg.</p> <ul style="list-style-type: none"> <li>– metastatic prostate cancer.</li> </ul>
<p><i>dexamethasone</i></p>	<p><b>Injection:</b> 4 mg/ mL in 1- mL ampoule (as disodium phosphate salt).</p> <p><b>Oral liquid:</b> 2 mg/5 mL <b>[c]</b>.</p> <ul style="list-style-type: none"> <li>– acute lymphoblastic leukemia.</li> </ul>
<p><input type="checkbox"/> <i>leuprorelin</i></p>	<p><b>Dose form</b></p> <ul style="list-style-type: none"> <li>– early stage breast cancer</li> <li>– metastatic prostate cancer</li> </ul>
<p><i>hydrocortisone</i></p>	<p><b>Powder for injection:</b> 100 mg (as sodium succinate) in vial.</p> <ul style="list-style-type: none"> <li>– acute lymphoblastic leukemia.</li> </ul>
<p><i>methylprednisolone [c]</i></p>	<p><b>Injection:</b> 40 mg/ mL (as sodium succinate) in 1- mL single-dose vial and 5- mL multi-dose vials; 80 mg/ mL (as sodium succinate) in 1- mL single-dose vial.</p> <ul style="list-style-type: none"> <li>– acute lymphoblastic leukemia.</li> </ul>

<input type="checkbox"/> prednisolone	<p><b>Oral liquid:</b> 5 mg/ mL [<b>C</b>].</p> <p><b>Tablet:</b> 5 mg; 25 mg.</p> <ul style="list-style-type: none"> <li>– chronic lymphocytic leukemia</li> <li>– diffuse large B-cell lymphoma</li> <li>– Hodgkin lymphoma</li> <li>– follicular lymphoma</li> <li>– acute lymphoblastic leukemia</li> <li>– Burkitt lymphoma</li> </ul>
tamoxifen	<p><b>Tablet:</b> 10 mg; 20 mg (as citrate).</p> <ul style="list-style-type: none"> <li>– early stage breast cancer</li> <li>– metastatic breast cancer</li> </ul>
<b>9. ANTIPARKINSONISM MEDICINES</b>	
<input type="checkbox"/> biperiden	<p><b>Injection:</b> 5 mg (lactate) in 1- mL ampoule.</p> <p><b>Tablet:</b> 2 mg (hydrochloride).</p>
levodopa + <input type="checkbox"/> carbidopa	<b>Tablet:</b> 100 mg + 10 mg; 100 mg + 25 mg; 250 mg + 25 mg
<b>10. MEDICINES AFFECTING THE BLOOD</b>	
<b>10.1 Antianaemia medicines</b>	
ferrous salt	<p><b>Oral liquid:</b> equivalent to 25 mg iron (as sulfate)/ mL.</p> <p><b>Tablet:</b> equivalent to 60 mg iron.</p>
ferrous salt + folic acid	<b>Tablet:</b> equivalent to 60 mg iron + 400 micrograms folic acid (nutritional supplement for use during pregnancy).
folic acid	<p><b>Tablet:</b> 400 micrograms*; 1 mg; 5 mg.</p> <p>*periconceptual use for prevention of first occurrence of neural tube defects</p>
hydroxocobalamin	<b>Injection:</b> 1 mg (as acetate, as hydrochloride or as sulfate) in 1- mL ampoule.
<b>10.2 Medicines affecting coagulation</b>	
<input type="checkbox"/> enoxaparin*	<p><b>Injection: ampoule or pre-filled syringe</b></p> <p>20 mg/0.2 mL; 40 mg/0.4 mL; 60 mg/0.6 mL; 80 mg/0.8 mL; 100 mg/1 mL; 120 mg/0.8 mL; 150 mg/1 mL</p> <p>*Alternatives are limited to nadroparin and dalteparin</p>
heparin sodium	<b>Injection:</b> 1000 IU/ mL; 5000 IU/ mL; 20 000 IU/ mL in 1- mL ampoule.

phytomenadione	<b>Injection:</b> 1 mg/ mL [c]; 10 mg/ mL in 5- mL ampoule. <b>Tablet:</b> 10 mg.
protamine sulfate	<b>Injection:</b> 10 mg/ mL in 5- mL ampoule.
tranexamic acid	<b>Injection:</b> 100 mg/ mL in 10- mL ampoule.
<input type="checkbox"/> warfarin	<b>Tablet:</b> 1 mg; 2 mg; 5 mg (sodium salt).
<b>Complementary List [c]</b>	
<i>desmopressin</i>	<b>Injection:</b> 4 micrograms/ mL (as acetate) in 1- mL ampoule. <b>Nasal spray:</b> 10 micrograms (as acetate) per dose
<i>heparin sodium</i>	<b>Injection:</b> 1000 IU/ mL; 5000 IU/ mL in 1- mL ampoule.
<i>protamine sulfate</i>	<b>Injection:</b> 10 mg/ mL in 5- mL ampoule.
<input type="checkbox"/> <i>warfarin</i>	<b>Tablet:</b> 0.5 mg; 1 mg; 2 mg; 5 mg (sodium salt).
<b>10.3 Other medicines for haemoglobinopathies</b>	
<b>Complementary List</b>	
<i>deferoxamine*</i>	<b>Powder for injection:</b> 500 mg (mesilate) in vial. * Deferasirox oral form may be an alternative, depending on cost and availability.
<i>hydroxycarbamide</i>	<b>Solid oral dosage form:</b> 200 mg; 500 mg; 1 g.
<b>11. BLOOD PRODUCTS OF HUMAN ORIGIN AND PLASMA SUBSTITUTES</b>	
<b>11.1 Blood and blood components</b>	
In accordance with the World Health Assembly resolution WHA63.12, WHO recognizes that achieving self-sufficiency, unless special circumstances preclude it, in the supply of safe blood components based on voluntary, non-remunerated blood donation, and the security of that supply are important national goals to prevent blood shortages and meet the transfusion requirements of the patient population. All preparations should comply with the WHO requirements.	
fresh-frozen plasma	
platelets	
red blood cells	
whole blood	
<b>11.2 Plasma-derived medicines</b>	
All human plasma-derived medicines should comply with the WHO requirements.	
<b>11.2.1 Human immunoglobulins</b>	
anti-D immunoglobulin	<b>Injection:</b> 250 micrograms in single-dose vial.
Anti-rabies immunoglobulin	<b>Injection:</b> 150 IU/ mL in vial.
Anti-tetanus immunoglobulin	<b>Injection:</b> 500 IU in vial.
<b>Complementary List</b>	

normal immunoglobulin	<p><b>Intramuscular administration:</b> 16% protein solution.*</p> <p><b>Intravenous administration:</b> 5%; 10% protein solution.**</p> <p><b>Subcutaneous administration:</b> 15%; 16% protein solution.*</p> <p>* Indicated for primary immune deficiency. **Indicated for primary immune deficiency and Kawasaki disease.</p>
<b>11.2.2 Blood coagulation factors</b>	
<i>Complementary List</i>	
<input type="checkbox"/> coagulation factor VIII	<b>Powder for injection:</b> 500 IU/vial.
<input type="checkbox"/> coagulation factor IX	<b>Powder for injection:</b> 500 IU/vial, 1000 IU/vial.
<b>11.3 Plasma substitutes</b>	
<input type="checkbox"/> dextran 70*	<p><b>Injectable solution:</b> 6%.</p> <p>* Polygeline, injectable solution, 3.5% is considered as equivalent.</p>
<b>12. CARDIOVASCULAR MEDICINES</b>	
<b>12.1 Antianginal medicines</b>	
<input type="checkbox"/> bisoprolol*	<p><b>Tablet:</b> 1.25 mg; 5 mg.</p> <p>* <input type="checkbox"/> includes metoprolol and carvedilol as alternatives.</p>
glyceryl trinitrate	<b>Tablet (sublingual):</b> 500 micrograms.
<input type="checkbox"/> isosorbide dinitrate	<b>Tablet (sublingual):</b> 5 mg.
verapamil	<b>Tablet:</b> 40 mg; 80 mg (hydrochloride).
<b>12.2 Antiarrhythmic medicines</b>	
<input type="checkbox"/> bisoprolol*	<p><b>Tablet:</b> 1.25 mg; 5 mg.</p> <p>* <input type="checkbox"/> includes metoprolol and carvedilol as alternatives.</p>
digoxin	<p><b>Injection:</b> 250 micrograms/ mL in 2- mL ampoule.</p> <p><b>Oral liquid:</b> 50 micrograms/ mL.</p> <p><b>Tablet:</b> 62.5 micrograms; 250 micrograms.</p>
epinephrine (adrenaline)	<b>Injection:</b> 100 micrograms/ mL (as acid tartrate or hydrochloride) in 10- mL ampoule.
lidocaine	<b>Injection:</b> 20 mg (hydrochloride)/ mL in 5- mL ampoule.

verapamil	<b>Injection:</b> 2.5 mg (hydrochloride)/ mL in 2- mL ampoule. <b>Tablet:</b> 40 mg; 80 mg (hydrochloride).
<i>Complementary List</i>	
<i>amiodarone</i>	<b>Injection:</b> 50 mg/ mL in 3- mL ampoule (hydrochloride). <b>Tablet:</b> 100 mg; 200 mg; 400 mg (hydrochloride).
<b>12.3 Antihypertensive medicines</b>	
<input type="checkbox"/> amlodipine	<b>Tablet:</b> 5 mg (as maleate, mesylate or besylate).
<input type="checkbox"/> bisoprolol*	<b>Tablet:</b> 1.25 mg; 5 mg. * includes atenolol, metoprolol and carvedilol as alternatives. Atenolol should not be used as a first-line agent in uncomplicated hypertension in patients >60 years
<input type="checkbox"/> enalapril	<b>Tablet:</b> 2.5 mg; 5 mg (as hydrogen maleate).
hydralazine*	<b>Powder for injection:</b> 20 mg (hydrochloride) in ampoule. <b>Tablet:</b> 25 mg; 50 mg (hydrochloride). * Hydralazine is listed for use only in the acute management of severe pregnancy-induced hypertension. Its use in the treatment of essential hypertension is not recommended in view of the evidence of greater efficacy and safety of other medicines.
<input type="checkbox"/> hydrochlorothiazide	<b>Oral liquid:</b> 50 mg/5 mL. <b>Solid oral dosage form:</b> 12.5 mg; 25 mg.
methyldopa*	<b>Tablet:</b> 250 mg. * Methyldopa is listed for use only in the management of pregnancy-induced hypertension. Its use in the treatment of essential hypertension is not recommended in view of the evidence of greater efficacy and safety of other medicines.
<i>Complementary List</i>	
<i>sodium nitroprusside</i>	<b>Powder for infusion:</b> 50 mg in ampoule.
<b>12.4 Medicines used in heart failure</b>	
<input type="checkbox"/> bisoprolol*	<b>Tablet:</b> 1.25 mg; 5 mg. * <input type="checkbox"/> includes metoprolol and carvedilol as alternatives.

digoxin	<b>Injection:</b> 250 micrograms/ mL in 2- mL ampoule. <b>Oral liquid:</b> 50 micrograms/ mL. <b>Tablet:</b> 62.5 micrograms; 250 micrograms.
<input type="checkbox"/> enalapril	<b>Tablet:</b> 2.5 mg; 5 mg (as hydrogen maleate).
<input type="checkbox"/> furosemide	<b>Injection:</b> 10 mg/ mL in 2- mL ampoule. <b>Oral liquid:</b> 20 mg/5 mL <b>[c]</b> . <b>Tablet:</b> 40 mg.
<input type="checkbox"/> hydrochlorothiazide	<b>Oral liquid:</b> 50 mg/5 mL. <b>Solid oral dosage form:</b> 25 mg.
spironolactone	<b>Tablet:</b> 25 mg.
<i>Complementary List</i>	
dopamine	<b>Injection:</b> 40 mg/ mL (hydrochloride) in 5- mL vial.
<b>12.5 Antithrombotic medicines</b>	
<b>12.5.1 Anti-platelet medicines</b>	
acetylsalicylic acid	<b>Tablet:</b> 100 mg.
clopidogrel	<b>Tablet:</b> 75 mg; 300 mg
<b>12.5.2 Thrombolytic medicines</b>	
<i>Complementary List</i>	
streptokinase	<b>Powder for injection:</b> 1.5 million IU in vial.
<b>12.6 Lipid-lowering agents</b>	
<input type="checkbox"/> simvastatin*	<b>Tablet:</b> 5 mg; 10 mg; 20 mg; 40 mg. * For use in high-risk patients.
<b>13. DERMATOLOGICAL MEDICINES (topical)</b>	
<b>13.1 Antifungal medicines</b>	
<input type="checkbox"/> miconazole	<b>Cream or ointment:</b> 2% (nitrate).
selenium sulfide	<b>Detergent-based suspension:</b> 2%.
sodium thiosulfate	<b>Solution:</b> 15%.
terbinafine	<b>Cream:</b> 1% <b>or Ointment:</b> 1% terbinafine hydrochloride.
<b>13.2 Anti-infective medicines</b>	
mupirocin	<b>Cream (as mupirocin calcium):</b> 2%. <b>Ointment:</b> 2%.
potassium permanganate	<b>Aqueous solution:</b> 1:10 000.

silver sulfadiazine <input type="checkbox"/> <b>a</b>	<b>Cream:</b> 1%. <b>a</b> >2 months.
<b>13.3 Anti-inflammatory and antipruritic medicines</b>	
<input type="checkbox"/> betamethasone <input type="checkbox"/> <b>a</b>	<b>Cream or ointment:</b> 0.1% (as valerate). <b>a</b> Hydrocortisone preferred in neonates.
<input type="checkbox"/> calamine	<b>Lotion.</b>
<input type="checkbox"/> hydrocortisone	<b>Cream or ointment:</b> 1% (acetate).
<b>13.4 Medicines affecting skin differentiation and proliferation</b>	
benzoyl peroxide	<b>Cream or lotion:</b> 5%.
coal tar	<b>Solution:</b> 5%.
fluorouracil	<b>Ointment:</b> 5%.
<input type="checkbox"/> podophyllum resin	<b>Solution:</b> 10% to 25%.
salicylic acid	<b>Solution:</b> 5%.
urea	<b>Cream or ointment:</b> 5%; 10%.
<b>13.5 Scabicides and pediculicides</b>	
<input type="checkbox"/> benzyl benzoate <input type="checkbox"/> <b>a</b>	<b>Lotion:</b> 25%. <b>a</b> >2 years.
permethrin	<b>Cream:</b> 5%. <b>Lotion:</b> 1%.
<b>14. DIAGNOSTIC AGENTS</b>	
<b>14.1 Ophthalmic medicines</b>	
fluorescein	<b>Eye drops:</b> 1% (sodium salt).
<input type="checkbox"/> tropicamide	<b>Eye drops:</b> 0.5%.
<b>14.2 Radiocontrast media</b>	
<input type="checkbox"/> amidotrizoate	<b>Injection:</b> 140 mg to 420 mg iodine (as sodium or meglumine salt)/ mL in 20- mL ampoule.
barium sulfate	<b>Aqueous suspension.</b>
<input type="checkbox"/> iohexol	<b>Injection:</b> 140 mg to 350 mg iodine/ mL in 5- mL; 10- mL; 20- mL ampoules.
<i>Complementary List</i>	
barium sulfate <b>[c]</b>	<i>Aqueous suspension.</i>
<input type="checkbox"/> meglumine iotroxate	<i>Solution: 5 g to 8 g iodine in 100 mL to 250 mL.</i>
<b>15. DISINFECTANTS AND ANTISEPTICS</b>	
<b>15.1 Antiseptics</b>	



<input type="checkbox"/> chlorhexidine	<b>Solution:</b> 5% (digluconate).
<input type="checkbox"/> ethanol	<b>Solution:</b> 70% (denatured).
<input type="checkbox"/> povidone iodine	<b>Solution:</b> 10% (equivalent to 1% available iodine).
<b>15.2 Disinfectants</b>	
alcohol based hand rub	<b>Solution</b> containing ethanol 80% volume /volume <b>Solution</b> containing isopropyl alcohol 75% volume/volume
<input type="checkbox"/> chlorine base compound	<b>Powder:</b> (0.1% available chlorine) for solution.
<input type="checkbox"/> chloroxylenol	<b>Solution:</b> 4.8%.
glutaral	<b>Solution:</b> 2%.
<b>16. DIURETICS</b>	
amiloride	<b>Tablet:</b> 5 mg (hydrochloride).
<input type="checkbox"/> furosemide	<b>Injection:</b> 10 mg/ mL in 2- mL ampoule. <b>Oral liquid:</b> 20 mg/5 mL [c]. <b>Tablet:</b> 10 mg [c]; 20 mg [c]; 40 mg.
<input type="checkbox"/> hydrochlorothiazide	<b>Solid oral dosage form:</b> 25 mg.
mannitol	<b>Injectable solution:</b> 10%; 20%.
spironolactone	<b>Tablet:</b> 25 mg.
<b>Complementary List [c]</b>	
<input type="checkbox"/> hydrochlorothiazide	<b>Tablet (scored):</b> 25 mg.
mannitol	<b>Injectable solution:</b> 10%; 20%.
spironolactone	<b>Oral liquid:</b> 5 mg/5 mL; 10 mg/5 mL; 25 mg/5 mL. <b>Tablet:</b> 25 mg.
<b>17. GASTROINTESTINAL MEDICINES</b>	
<b>Complementary List [c]</b>	
<input type="checkbox"/> pancreatic enzymes	Age-appropriate formulations and doses including lipase, protease and amylase.
<b>17.1 Antiulcer medicines</b>	
<input type="checkbox"/> omeprazole	<b>Powder for injection:</b> 40 mg in vial <b>Powder for oral liquid:</b> 20 mg; 40 mg sachets. <b>Solid oral dosage form:</b> 10 mg; 20 mg; 40 mg.

<input type="checkbox"/> ranitidine	<p><b>Injection:</b> 25 mg/ mL (as hydrochloride) in 2- mL ampoule.</p> <p><b>Oral liquid:</b> 75 mg/5 mL (as hydrochloride).</p> <p><b>Tablet:</b> 150 mg (as hydrochloride).</p>
<p><b>17.2 Antiemetic medicines</b></p>	
<p>dexamethasone</p>	<p><b>Injection:</b> 4 mg/ mL in 1- mL ampoule (as disodium phosphate salt).</p> <p><b>Oral liquid:</b> 0.5 mg/5 mL; 2 mg/5 mL.</p> <p><b>Solid oral dosage form:</b> 0.5 mg; 0.75 mg; 1.5 mg; 4 mg.</p>
<p>metoclopramide <input type="checkbox"/> <b>a</b></p>	<p><b>Injection:</b> 5 mg (hydrochloride)/ mL in 2- mL ampoule.</p> <p><b>Oral liquid:</b> 5 mg/5 mL <b>[c]</b>.</p> <p><b>Tablet:</b> 10 mg (hydrochloride).</p> <p><input type="checkbox"/> <b>a</b> Not in neonates.</p>
<p>ondansetron <input type="checkbox"/> <b>a</b></p>	<p><b>Injection:</b> 2 mg base/ mL in 2- mL ampoule (as hydrochloride).</p> <p><b>Oral liquid:</b> 4 mg base/5 mL.</p> <p><b>Solid oral dosage form:</b> Eq 4 mg base; Eq 8 mg base; Eq 24 mg base.</p> <p><input type="checkbox"/> <b>a</b> &gt;1 month.</p>
<p><b>17.3 Anti-inflammatory medicines</b></p>	
<p><input type="checkbox"/> sulfasalazine</p>	<p><b>Retention enema.</b></p> <p><b>Suppository:</b> 500 mg.</p> <p><b>Tablet:</b> 500 mg.</p>
<p><i>Complementary List</i></p>	
<p><input type="checkbox"/> <i>hydrocortisone</i></p>	<p><i>Retention enema.</i></p> <p><i>Suppository:</i> 25 mg (acetate). (the <input type="checkbox"/> only applies to hydrocortisone retention enema).</p>
<p><b>17.4 Laxatives</b></p>	
<p><input type="checkbox"/> senna</p>	<p><b>Tablet:</b> 7.5 mg (sennosides) (or traditional dosage forms).</p>
<p><b>17.5 Medicines used in diarrhoea</b></p>	
<p><b>17.5.1 Oral rehydration</b></p>	

oral rehydration salts	<p><b>Powder for dilution</b> in 200 mL; 500 mL; 1 L.</p> <p>glucose: 75 mEq sodium: 75 mEq <b>or</b> mmol/L chloride: 65 mEq <b>or</b> mmol/L potassium: 20 mEq <b>or</b> mmol/L citrate: 10 mmol/L osmolality: 245 mOsm/L glucose: 13.5 g/L sodium chloride: 2.6 g/L potassium chloride: 1.5 g/L trisodium citrate dihydrate*: 2.9 g/L</p> <p>*trisodium citrate dihydrate may be replaced by sodium hydrogen carbonate (sodium bicarbonate) 2.5 g/L. However, as the stability of this latter formulation is very poor under tropical conditions, it is recommended only when manufactured for immediate use.</p>
<b>17.5.2 Medicines for diarrhoea</b>	
zinc sulfate*	<p><b>Solid oral dosage form:</b> 20 mg.</p> <p>* In acute diarrhoea zinc sulfate should be used as an adjunct to oral rehydration salts.</p>
<b>18. HORMONES, OTHER ENDOCRINE MEDICINES AND CONTRACEPTIVES</b>	
<b>18.1 Adrenal hormones and synthetic substitutes</b>	
fludrocortisone	<b>Tablet:</b> 100 micrograms (acetate).
hydrocortisone	<b>Tablet:</b> 5 mg; 10 mg; 20 mg.
<b>18.2 Androgens</b>	
<i>Complementary List</i>	
<i>testosterone</i>	<b>Injection:</b> 200 mg (enanthate) in 1- mL ampoule.
<b>18.3 Contraceptives</b>	
<b>18.3.1 Oral hormonal contraceptives</b>	
<input type="checkbox"/> ethinylestradiol + <input type="checkbox"/> levonorgestrel	<b>Tablet:</b> 30 micrograms + 150 micrograms.
<input type="checkbox"/> ethinylestradiol + <input type="checkbox"/> norethisterone	<b>Tablet:</b> 35 micrograms + 1 mg.
levonorgestrel	<b>Tablet:</b> 30 micrograms; 750 micrograms (pack of two); 1.5 mg.
<b>18.3.2 Injectable hormonal contraceptives</b>	
estradiol cypionate + medroxyprogesterone acetate	<b>Injection:</b> 5 mg + 25 mg.
medroxyprogesterone acetate	<b>Depot injection:</b> 150 mg/ mL in 1- mL vial.
norethisterone enantate	<b>Oily solution:</b> 200 mg/ mL in 1- mL ampoule.
<b>18.3.3 Intrauterine devices</b>	

copper-containing device	
levonorgestrel-releasing intrauterine system	Intrauterine system with reservoir containing 52 mg of levonorelrel
<b>18.3.4 Barrier methods</b>	
condoms	
diaphragms	
<b>18.3.5 Implantable contraceptives</b>	
etonogestrel-releasing implant	Single-rod etonogestrel-releasing implant, containing 68 mg of etonogestrel.
levonorgestrel-releasing implant	Two-rod levonorgestrel-releasing implant, each rod containing 75 mg of levonorgestrel (150 mg total).
<b>18.3.5 Intravaginal contraceptives</b>	
progesterone vaginal ring*	Progesterone-releasing vaginal ring containing 2.074 g of micronized progesterone.  *For use in women actively breastfeeding at least 4 times per day
<b>18.4 Estrogens</b>	
<b>18.5 Insulins and other medicines used for diabetes</b>	
<input type="checkbox"/> gliclazide*	<b>Solid oral dosage form:</b> (controlled-release tablets) 30 mg; 60 mg;  80 mg.  * glibenclamide not suitable above 60 years.
glucagon	<b>Injection:</b> 1 mg/ mL.
insulin injection (soluble)	<b>Injection:</b> 40 IU/ mL in 10- mL vial; 100 IU/ mL in 10- mL vial.
intermediate-acting insulin	<b>Injection:</b> 40 IU/ mL in 10- mL vial; 100 IU/ mL in 10- mL vial (as compound insulin zinc suspension <b>or</b> isophane insulin).
metformin	<b>Tablet:</b> 500 mg (hydrochloride).
<b>Complementary List [c]</b>	
<i>metformin</i>	<b>Tablet:</b> 500 mg (hydrochloride).
<b>18.6 Ovulation inducers</b>	
<b>Complementary List</b>	
<i>clomifene</i>	<b>Tablet:</b> 50 mg (citrate).
<b>18.7 Progestogens</b>	
<input type="checkbox"/> medroxyprogesterone acetate	<b>Tablet:</b> 5 mg.

<b>18.8 Thyroid hormones and antithyroid medicines</b>	
levothyroxine	<b>Tablet:</b> 25 micrograms <b>[c]</b> ; 50 micrograms; 100 micrograms (sodium salt).
potassium iodide	<b>Tablet:</b> 60 mg.
<input type="checkbox"/> propylthiouracil	<b>Tablet:</b> 50 mg.
<b>Complementary List [c]</b>	
<i>Lugol's solution</i>	<b>Oral liquid:</b> about 130 mg total iodine/ mL.
<i>potassium iodide</i>	<b>Tablet:</b> 60 mg.
<i>propylthiouracil</i>	<b>Tablet:</b> 50 mg.
<b>19. IMMUNOLOGICALS</b>	
<b>19.1 Diagnostic agents</b>	
All tuberculins should comply with the WHO requirements for tuberculins.	
tuberculin, purified protein derivative (PPD)	<b>Injection.</b>
<b>19.2 Sera and immunoglobulins</b>	
All plasma fractions should comply with the WHO requirements.	
Anti-venom immunoglobulin*	<b>Injection.</b> * Exact type to be defined locally.
diphtheria antitoxin	<b>Injection:</b> 10 000 IU; 20 000 IU in vial.
<b>19.3 Vaccines</b>	
<p>WHO immunization policy recommendations are published in vaccine position papers on the basis of recommendations made by the Strategic Advisory Group of Experts on Immunization (SAGE).</p> <p>WHO vaccine position papers are updated three to four times per year. The list below details the vaccines for which there is a recommendation from SAGE and a corresponding WHO position paper as at [DATE]. The most recent versions of the WHO position papers, reflecting the current evidence related to a specific vaccine and the related recommendations, can be accessed at any time on the WHO website at:</p> <p><a href="http://www.who.int/immunization/documents/positionpapers/en/index.html">http://www.who.int/immunization/documents/positionpapers/en/index.html</a>.</p> <p>Vaccine recommendations may be universal or conditional (e.g., in certain regions, in some high-risk populations or as part of immunization programmes with certain characteristics). Details are available in the relevant position papers, and in the Summary Tables of WHO Routine Immunization Recommendations available on the WHO website at:</p> <p><a href="http://www.who.int/immunization/policy/immunization_tables/en/index.html">http://www.who.int/immunization/policy/immunization_tables/en/index.html</a>.</p> <p>Selection of vaccines from the Model List will need to be determined by each country after consideration of international recommendations, epidemiology and national priorities.</p> <p>All vaccines should comply with the WHO requirements for biological substances.</p> <p>WHO noted the need for vaccines used in children to be polyvalent.</p>	
<b>Recommendations for all</b>	
BCG vaccine	

diphtheria vaccine	
Haemophilus influenzae type b vaccine	
hepatitis B vaccine	
HPV vaccine	
measles vaccine	
pertussis vaccine	
pneumococcal vaccine	
poliomyelitis vaccine	
rotavirus vaccine	
rubella vaccine	
tetanus vaccine	
<i>Recommendations for certain regions</i>	
Japanese encephalitis vaccine	
yellow fever vaccine	
tick-borne encephalitis vaccine	
<i>Recommendations for some high-risk populations</i>	
cholera vaccine	
hepatitis A vaccine	
meningococcal meningitis vaccine	
rabies vaccine	
typhoid vaccine	
<i>Recommendations for immunization programmes with certain characteristics</i>	
influenza vaccine (seasonal)	
mumps vaccine	
varicella vaccine	
<b>20. MUSCLE RELAXANTS (PERIPHERALLY-ACTING) AND CHOLINESTERASE INHIBITORS</b>	
<input type="checkbox"/> atracurium	<b>Injection:</b> 10 mg/ mL (besylate).

neostigmine	<b>Injection:</b> 500 micrograms in 1- mL ampoule; 2.5 mg (metilsulfate) in 1- mL ampoule. <b>Tablet:</b> 15 mg (bromide).
suxamethonium	<b>Injection:</b> 50 mg (chloride)/ mL in 2- mL ampoule. <b>Powder for injection</b> (chloride), in vial.
<input type="checkbox"/> vecuronium <b>[c]</b>	<b>Powder for injection:</b> 10 mg (bromide) in vial.
<i>Complementary List</i>	
<i>pyridostigmine</i>	<b>Injection:</b> 1 mg in 1- mL ampoule. <b>Tablet:</b> 60 mg (bromide).
<input type="checkbox"/> <i>vecuronium</i>	<b>Powder for injection:</b> 10 mg (bromide) in vial.
<b>21. OPHTHALMOLOGICAL PREPARATIONS</b>	
<b>21.1 Anti-infective agents</b>	
aciclovir	<b>Ointment:</b> 3% W/W.
azithromycin	<b>Solution (eye drops):</b> 1.5%.
<input type="checkbox"/> gentamicin	<b>Solution (eye drops):</b> 0.3% (sulfate).
<input type="checkbox"/> ofloxacin	<b>Solution (eye drops):</b> 0.3%.
<input type="checkbox"/> tetracycline	<b>Eye ointment:</b> 1% (hydrochloride).
<b>21.2 Anti-inflammatory agents</b>	
<input type="checkbox"/> prednisolone	<b>Solution (eye drops):</b> 0.5% (sodium phosphate).
<b>21.3 Local anaesthetics</b>	
<input type="checkbox"/> tetracaine <b>[a]</b>	<b>Solution (eye drops):</b> 0.5% (hydrochloride). <b>[a]</b> Not in preterm neonates.
<b>21.4 Miotics and antiglaucoma medicines</b>	
acetazolamide	<b>Tablet:</b> 250 mg.
latanoprost	<b>Solution (eye drops):</b> latanoprost 50 micrograms/mL
<input type="checkbox"/> pilocarpine	<b>Solution (eye drops):</b> 2%; 4% (hydrochloride or nitrate).
<input type="checkbox"/> timolol	<b>Solution (eye drops):</b> 0.25%; 0.5% (as hydrogen maleate).
<b>21.5 Mydriatics</b>	
atropine* <b>[a]</b>	<b>Solution (eye drops):</b> 0.1%; 0.5%; 1% (sulfate). * <b>[c]</b> Or homatropine (hydrobromide) or cyclopentolate (hydrochloride). <b>[a]</b> >3 months.
<i>Complementary List</i>	

<i>epinephrine (adrenaline)</i>	<i>Solution (eye drops): 2% (as hydrochloride).</i>
<b>21.6 Anti-vascular endothelial growth factor (VEGF) preparations</b>	
<i>Complementary List</i>	
<i>bevacizumab</i>	<i>Injection: 25 mg/ mL.</i>
<b>22. OXYTOCICS AND ANTIOXYTOCICS</b>	
<b>22.1 Oxytocics</b>	
<input type="checkbox"/> ergometrine	<b>Injection:</b> 200 micrograms (hydrogen maleate) in 1- mL ampoule.
misoprostol	<p><b>Tablet:</b> 200 micrograms.</p> <ul style="list-style-type: none"> <li>– Management of incomplete abortion and miscarriage;</li> <li>– Prevention and treatment of postpartum haemorrhage where oxytocin is not available or cannot be safely used</li> </ul> <p><b>Vaginal tablet:</b> 25 micrograms.*</p> <p>* Only for use for induction of labour where appropriate facilities are available.</p>
oxytocin	<b>Injection:</b> 10 IU in 1- mL.
<i>Complementary List</i>	
<i>mifepristone* – misoprostol*</i>	<p><i>Tablet 200 mg – tablet 200 micrograms.</i></p> <p><i>* Requires close medical supervision.</i></p>
<i>Where permitted under national law and where culturally acceptable.</i>	
<b>22.2 Antioxytocics (tocolytics)</b>	
nifedipine	<b>Immediate-release capsule:</b> 10 mg.
<b>23. PERITONEAL DIALYSIS SOLUTION</b>	
<i>Complementary List</i>	
<i>intraperitoneal dialysis solution (of appropriate composition)</i>	<i>Parenteral solution.</i>
<b>24. MEDICINES FOR MENTAL AND BEHAVIOURAL DISORDERS</b>	
<b>24.1 Medicines used in psychotic disorders</b>	
<input type="checkbox"/> chlorpromazine	<p><b>Injection:</b> 25 mg (hydrochloride)/ mL in 2- mL ampoule.</p> <p><b>Oral liquid:</b> 25 mg (hydrochloride)/5 mL.</p> <p><b>Tablet:</b> 100 mg (hydrochloride).</p>
<input type="checkbox"/> fluphenazine	<b>Injection:</b> 25 mg (decanoate <b>or</b> enantate) in 1- mL ampoule.



<input type="checkbox"/> haloperidol	<b>Injection:</b> 5 mg in 1- mL ampoule. <b>Tablet:</b> 2 mg; 5 mg.
risperidone	<b>Solid oral dosage form:</b> 0.25 mg to 6.0 mg.
<i>Complementary List</i>	
chlorpromazine <b>[c]</b>	<b>Injection:</b> 25 mg (hydrochloride)/ mL in 2- mL ampoule. <b>Oral liquid:</b> 25 mg (hydrochloride)/5 mL. <b>Tablet:</b> 10 mg; 25 mg; 50 mg; 100 mg (hydrochloride).
clozapine	<b>Solid oral dosage form:</b> 25 to 200 mg.
haloperidol <b>[c]</b>	<b>Injection:</b> 5 mg in 1- mL ampoule. <b>Oral liquid:</b> 2 mg/ mL. <b>Solid oral dosage form:</b> 0.5 mg; 2 mg; 5 mg.
<b>24.2 Medicines used in mood disorders</b>	
<b>24.2.1 Medicines used in depressive disorders</b>	
<input type="checkbox"/> amitriptyline	<b>Tablet:</b> 25 mg; 75mg. (hydrochloride).
fluoxetine	<b>Solid oral dosage form:</b> 20 mg (as hydrochloride).
<i>Complementary List [c]</i>	
fluoxetine <b>[a]</b>	<b>Solid oral dosage form:</b> 20 mg (as hydrochloride). <b>[a]</b> >8 years.
<b>24.2.2 Medicines used in bipolar disorders</b>	
carbamazepine	<b>Tablet (scored):</b> 100 mg; 200 mg.
lithium carbonate	<b>Solid oral dosage form:</b> 300 mg.
valproic acid (sodium valproate)	<b>Tablet (enteric-coated):</b> 200 mg; 500 mg (sodium valproate).
<b>24.3 Medicines for anxiety disorders</b>	
<input type="checkbox"/> diazepam	<b>Tablet (scored):</b> 2 mg; 5 mg.
<b>24.4 Medicines used for obsessive compulsive disorders</b>	
clomipramine	<b>Capsule:</b> 10 mg; 25 mg (hydrochloride).
<b>24.5 Medicines for disorders due to psychoactive substance use</b>	
nicotine replacement therapy (NRT)	<b>Chewing gum:</b> 2 mg; 4 mg (as polacrilex). <b>Transdermal patch:</b> 5 mg to 30 mg/16 hrs; 7 mg to 21 mg/24 hrs.
<i>Complementary List</i>	

<input type="checkbox"/> methadone*	<p><b>Concentrate for oral liquid:</b> 5 mg/ mL; 10 mg/ mL (hydrochloride).</p> <p><b>Oral liquid:</b> 5 mg/5 mL; 10 mg/5 mL (hydrochloride).</p> <p>* The square box is added to include buprenorphine. The medicines should only be used within an established support programme.</p>
<p><b>25. MEDICINES ACTING ON THE RESPIRATORY TRACT</b></p>	
<p><b>25.1 Antiasthmatic and medicines for chronic obstructive pulmonary disease</b></p>	
<input type="checkbox"/> beclometasone	<p><b>Inhalation (aerosol):</b> 50 micrograms (dipropionate) per dose; 100 micrograms (dipropionate) per dose (as CFC free forms).</p>
<input type="checkbox"/> budesonide <b>[c]</b>	<p><b>Inhalation (aerosol):</b> 100 micrograms per dose; 200 micrograms per dose.</p>
epinephrine (adrenaline)	<p><b>Injection:</b> 1 mg (as hydrochloride or hydrogen tartrate) in 1- mL ampoule.</p>
ipratropium bromide	<p><b>Inhalation (aerosol):</b> 20 micrograms/metered dose.</p>
<input type="checkbox"/> salbutamol	<p><b>Inhalation (aerosol):</b> 100 micrograms (as sulfate) per dose.</p> <p><b>Injection:</b> 50 micrograms (as sulfate)/ mL in 5- mL ampoule.</p> <p><b>Metered dose inhaler (aerosol):</b> 100 micrograms (as sulfate) per dose.</p> <p><b>Respirator solution for use in nebulizers:</b> 5 mg (as sulfate)/ mL.</p>
<p><b>26. SOLUTIONS CORRECTING WATER, ELECTROLYTE AND ACID-BASE DISTURBANCES</b></p>	
<p><b>26.1 Oral</b></p>	
oral rehydration salts	See section 17.5.1.
potassium chloride	<p><b>Powder for solution.</b></p>
<p><b>26.2 Parenteral</b></p>	
glucose	<p><b>Injectable solution:</b> 5% (isotonic); 10% (hypertonic); 50% (hypertonic).</p>
glucose with sodium chloride	<p><b>Injectable solution:</b> 4% glucose, 0.18% sodium chloride (equivalent to Na<sup>+</sup> 30 mmol/L, Cl<sup>-</sup> 30 mmol/L).</p> <p><b>Injectable solution:</b> 5% glucose, 0.9% sodium chloride (equivalent to Na<sup>+</sup> 150 mmol/L and Cl<sup>-</sup> 150 mmol/L); 5% glucose, 0.45% sodium chloride (equivalent to Na<sup>+</sup> 75 mmol/L and Cl<sup>-</sup> 75 mmol/L) <b>[c]</b>.</p>

potassium chloride	<b>Solution:</b> 11.2% in 20- mL ampoule (equivalent to K <sup>+</sup> 1.5 mmol/ mL, Cl <sup>-</sup> 1.5 mmol/ mL). <b>Solution for dilution:</b> 7.5% (equivalent to K 1 mmol/ mL and Cl 1 mmol/ mL) <b>[c]</b> ; 15% (equivalent to K 2 mmol/ mL and Cl 2 mmol/ mL) <b>[c]</b> .
sodium chloride	<b>Injectable solution:</b> 0.9% isotonic (equivalent to Na <sup>+</sup> 154 mmol/L, Cl <sup>-</sup> 154 mmol/L).
sodium hydrogen carbonate	<b>Injectable solution:</b> 1.4% isotonic (equivalent to Na <sup>+</sup> 167 mmol/L, HCO <sub>3</sub> <sup>-</sup> 167 mmol/L). <b>Solution:</b> 8.4% in 10- mL ampoule (equivalent to Na <sup>+</sup> 1000 mmol/L, HCO <sub>3</sub> <sup>-</sup> 1000 mmol/L).
<input type="checkbox"/> sodium lactate, compound solution	<b>Injectable solution.</b>
<b>26.3 Miscellaneous</b>	
water for injection	2- mL; 5- mL; 10- mL ampoules.
<b>27. VITAMINS AND MINERALS</b>	
ascorbic acid	<b>Tablet:</b> 50 mg.
calcium	<b>Tablet:</b> 500 mg (elemental).
cholecalciferol* <b>[c]</b>	<b>Oral liquid:</b> 400 IU/ mL. <b>Solid oral dosage form:</b> 400 IU; 1000 IU. * Ergocalciferol can be used as an alternative.
<input type="checkbox"/> ergocalciferol	<b>Oral liquid:</b> 250 micrograms/ mL (10 000 IU/ mL). <b>Solid oral dosage form:</b> 1.25 mg (50 000 IU).
iodine	<b>Capsule:</b> 200 mg. <b>Iodized oil:</b> 1 mL (480 mg iodine); 0.5 mL (240 mg iodine) in ampoule (oral <b>or</b> injectable); 0.57 mL (308 mg iodine) in dispenser bottle.
<input type="checkbox"/> nicotinamide	<b>Tablet:</b> 50 mg.
pyridoxine	<b>Tablet:</b> 25 mg (hydrochloride).
retinol	<b>Capsule:</b> 50 000 IU; 100 000 IU; 200 000 IU (as palmitate). <b>Oral oily solution:</b> 100 000 IU (as palmitate)/ mL in multidose dispenser. <b>Tablet (sugar-coated):</b> 10 000 IU (as palmitate). <b>Water-miscible injection:</b> 100 000 IU (as palmitate) in 2- mL ampoule.
riboflavin	<b>Tablet:</b> 5 mg.
sodium fluoride	In any appropriate topical formulation.

thiamine	Tablet: 50 mg (hydrochloride).
<i>Complementary List</i>	
calcium gluconate	Injection: 100 mg/ mL in 10- mL ampoule.
<b>28. EAR, NOSE AND THROAT MEDICINES [c]</b>	
acetic acid	Topical: 2%, in alcohol.
<input type="checkbox"/> budesonide	Nasal spray: 100 micrograms per dose.
<input type="checkbox"/> ciprofloxacin	Topical: 0.3% drops (as hydrochloride).
<input type="checkbox"/> xylometazoline <sup>a</sup>	Nasal spray: 0.05%. <sup>a</sup> Not in children less than 3 months.
<b>29. SPECIFIC MEDICINES FOR NEONATAL CARE</b>	
<b>29.1 Medicines administered to the neonate [c]</b>	
caffeine citrate	Injection: 20 mg/ mL (equivalent to 10 mg caffeine base/ mL). Oral liquid: 20 mg/ mL (equivalent to 10 mg caffeine base/ mL).
Chlorhexidine	Solution or gel: 7.1% (digluconate) delivering 4% chlorhexidine (for umbilical cord care) [c].
<i>Complementary List</i>	
<input type="checkbox"/> ibuprofen	Solution for injection: 5 mg/ mL.
<input type="checkbox"/> prostaglandin E	Solution for injection: Prostaglandin E1: 0.5 mg/ mL in alcohol. Prostaglandin E 2: 1 mg/ mL.
surfactant	Suspension for intratracheal instillation: 25 mg/ mL or 80 mg/ mL.
<b>29.2 Medicines administered to the mother</b>	
dexamethasone	Injection: 4 mg/ mL dexamethasone phosphate (as disodium salt)
<b>30. MEDICINES FOR DISEASES OF JOINTS</b>	
<b>30.1 Medicines used to treat gout</b>	
allopurinol	Tablet: 100 mg.
<b>30.2 Disease-modifying agents used in rheumatoid disorders (DMARDs)</b>	
chloroquine	Tablet: 100 mg; 150 mg (as phosphate or sulfate).
<i>Complementary List</i>	
azathioprine	Tablet: 50 mg.
hydroxychloroquine [c]	Solid oral dosage form: 200 mg (as sulfate).
methotrexate	Tablet: 2.5 mg (as sodium salt).

# Essential Medicines

## WHO Model List

19th edition

<i>penicillamine</i>	<i>Solid oral dosage form: 250 mg.</i>
<i>sulfasalazine</i>	<i>Tablet: 500 mg.</i>
<b>30.3 Juvenile joint diseases</b>	
<i>acetylsalicylic acid* (acute or chronic use)</i>	<i>Suppository: 50 mg to 150 mg.</i> <i>Tablet: 100 mg to 500 mg.</i> <i>* For use for rheumatic fever, juvenile arthritis, Kawasaki disease.</i>

**Table 1.1: Medicines with age or weight restrictions**

atazanavir	>25 kg
atropine	>3 months
benzyl benzoate	>2 years
betamethasone topical preparations	hydrocortisone preferred in neonates
cefazolin	>1 month
ceftriaxone	>41 weeks corrected gestational age
darunavir	> 3 years
diloxanide	>25 kg
doxycycline	>8 years (except for serious infections e.g. cholera)
efavirenz	>3 years or >10 kg
<del>emtricitabine</del>	<del>&gt;3 months</del>
fluoxetine	>8 years
ibuprofen	>3 months (except IV form for patent ductus arteriosus)
mefloquine	>5 kg or >3 months
metoclopramide	Not in neonates
nevirapine	> 6 weeks
ondansetron	>1 month
saquinavir	>25 kg
silver sulfadiazine	>2 months
tetracaine	Not in preterm neonates
trimethoprim	>6 months
xylometazoline	>3 months

Table 1.2: Explanation of dosage forms

A. Principal dosage forms used in EML – oral administration

Term	Definition
Solid oral dosage form	<p>Refers to tablets or capsules or other solid dosage forms such as 'melts' that are immediate-release preparations. It implies that there is no difference in clinical efficacy or safety between the available dosage forms, and countries should therefore choose the form(s) to be listed depending on quality and availability.</p> <p>The term 'solid oral dosage form' is <i>never</i> intended to allow any type of modified-release tablet.</p>
Tablets	<p>Refers to:</p> <ul style="list-style-type: none"> <li>• uncoated or coated (film-coated or sugar-coated) tablets that are intended to be swallowed whole;</li> <li>• unscored and scored*;</li> <li>• tablets that are intended to be chewed before being swallowed;</li> <li>• tablets that are intended to be dispersed or dissolved in water or another suitable liquid before being swallowed;</li> <li>• tablets that are intended to be crushed before being swallowed.</li> </ul> <p>The term 'tablet' without qualification is <i>never</i> intended to allow any type of modified-release tablet.</p>
Tablets (qualified)	<p>Refers to a specific type of tablet:</p> <p><b>chewable</b> - tablets that are intended to be chewed before being swallowed;</p> <p><b>dispersible</b> - tablets that are intended to be dispersed in water or another suitable liquid before being swallowed;</p> <p><b>soluble</b> - tablets that are intended to be dissolved in water or another suitable liquid before being swallowed;</p> <p><b>crushable</b> - tablets that are intended to be crushed before being swallowed;</p> <p><b>scored</b> - tablets bearing a break mark or marks where sub-division is intended in order to provide doses of less than one tablet;</p> <p><b>sublingual</b> - tablets that are intended to be placed beneath the tongue.</p> <p>The term 'tablet' is <i>always</i> qualified with an additional term (in parentheses) in entries where one of the following types of tablet is intended: <b>gastro-resistant</b> (such tablets may sometimes be described as enteric-coated or as delayed-release), <b>prolonged-release</b> or another modified-release form.</p>

\* Scored tablets may be divided for ease of swallowing, provided that dose is a whole number of tablets.

Term	Definition
<b>Capsules</b>	Refers to hard or soft capsules.  The term 'capsule' without qualification is <i>never</i> intended to allow any type of modified-release capsule.
<b>Capsules (qualified)</b>	The term 'capsule' with qualification refers to <b>gastro-resistant</b> (such capsules may sometimes be described as enteric-coated or as delayed-release), <b>prolonged-release</b> or another modified-release form.
<b>Granules</b>	Preparations that are issued to patient as granules to be swallowed without further preparation, to be chewed, or to be taken in or with water or another suitable liquid.  The term 'granules' without further qualification is <i>never</i> intended to allow any type of modified-release granules.
<b>Oral powder</b>	Preparations that are issued to patient as powder (usually as single-dose) to be taken in or with water or another suitable liquid.
<b>Oral liquid</b>	Liquid preparations intended to be <i>swallowed</i> i.e. oral solutions, suspensions, emulsions and oral drops, including those constituted from powders or granules, but <i>not</i> those preparations intended for <i>oromucosal administration</i> e.g. gargles and mouthwashes.  Oral liquids presented as powders or granules may offer benefits in the form of better stability and lower transport costs. If more than one type of oral liquid is available on the same market (e.g. solution, suspension, granules for reconstitution), they may be interchanged and in such cases should be bioequivalent. It is preferable that oral liquids do not contain sugar and that solutions for children do not contain alcohol.

### B. Principal dosage forms used in EMLc – parenteral administration

Term	Definition
<b>Injection</b>	Refers to solutions, suspensions and emulsions including those constituted from powders or concentrated solutions.
<b>Injection (qualified)</b>	Route of administration is indicated in parentheses where relevant.
<b>Injection (oily)</b>	The term 'injection' is qualified by '(oily)' in relevant entries.
<b>Intravenous infusion</b>	Refers to solutions and emulsions including those constituted from powders or concentrated solutions.



**C. Other dosage forms**

<b>Mode of administration</b>	<b>Term to be used</b>
<b>To the eye</b>	Eye drops, eye ointments.
<b>Topical</b>	For liquids: lotions, paints. For semi-solids: cream, ointment.
<b>Rectal</b>	Suppositories, gel or solution.
<b>Vaginal</b>	Pessaries or vaginal tablets.
<b>Inhalation</b>	Powder for inhalation, pressurized inhalation, nebulizer.

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<i>bleomycin</i>	19	digoxin	27, 29
budesonide	40, 42	diloxanide	15
bupivacaine	1	<i>dimercaprol</i>	4
caffeine citrate	42	diphtheria antitoxin	35
calamine	30	diphtheria vaccine	36
calcium	42	<i>docetaxel</i>	21
<i>calcium folinate</i>	19	docusate sodium	3
calcium gluconate	4, 42	<i>dopamine</i>	29
<i>capecitabine</i>	19	<i>doxorubicin</i>	21
<i>capreomycin</i>	11	doxycycline	8, 16, 17
carbamazepine	5, 40	efavirenz (EFV or EFZ)	13
<i>carboplatin</i>	20	efavirenz + emtricitabine + tenofovir	13
cefalexin	7	eflornithine	18
cefazolin	7	emtricitabine + tenofovir	13

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enalapril	28, 29	iodine	42
enoxaparin	25	iohexol	30
entecavir	14	ipratropium bromide	40
<i>ephedrine</i>	1	<i>irinotecan</i>	22
epinephrine (adrenaline)	3, 28, 38, 40	isoflurane	1
ergocalciferol	42	isoniazid	10
ergometrine	38	isoniazid + pyrazinamide + rifampicin	10
erythromycin	8	isoniazid + rifampicin	10
estradiol cypionate + medroxyprogesterone acetate	33	isosorbide dinitrate	27
ethambutol	10	ivermectin	6
ethambutol + isoniazid	10	Japanese encephalitis vaccine	36
ethambutol + isoniazid + pyrazinamide + rifampicin	10	<i>kanamycin</i>	11
ethambutol + isoniazid + rifampicin	10	ketamine	1
ethanol	31	lactulose	3
ethinylestradiol + levonorgestrel	33	lamivudine (3TC)	12
ethinylestradiol + norethisterone	33	lamivudine + nevirapine + stavudine	13
<i>ethionamide</i>	11	lamivudine + nevirapine + zidovudine	13
<i>ethosuximide</i>	5	lamivudine + zidovudine	14
etonogestrel-releasing implant	34	latanoprost)	38
<i>etoposide</i>	21	ledipasvir + sofosbuvir	15
ferrous salt	25	<i>leuprorelin</i>	24
ferrous salt + folic acid	25	levamisole	6
<i>filgrastim</i>	22	levodopa + carbidopa	25
fluconazole	11	<i>levofloxacin</i>	11
flucytosine	11	levonorgestrel	33
<i>fludarabine</i>	21	levonorgestrel-releasing implant	34
fludrocortisone	33	levonorgestrel-releasing intrauterine system	34
fluorescein	30	levothyroxine	35
<i>fluorouracil</i>	21, 30	lidocaine	1, 28
fluoxetine	3, 39, 40	lidocaine + epinephrine (adrenaline)	1
fluphenazine	39	<i>linezolid</i>	11
folic acid	25	lithium carbonate	40
<i>fomepizole</i>	4	loperamide	3
fresh frozen plasma	26	lopinavir + ritonavir (LPV/r)	13
furosemide	29, 31	loratadine	4
<i>gemcitabine</i>	22	lorazepam	5
gentamicin	9, 37	<i>Lugol's solution</i>	35
gliclazide	34	magnesium sulfate	5
glucagon	34	mannitol	31
glucose	41	measles vaccine	36
glucose with sodium chloride	41	mebendazole	6
glutaral	31	medroxyprogesterone acetate	34, 35
glyceryl trinitrate	27	mefloquine	17
griseofulvin	11	<i>meglumine iotroxate</i>	31
Haemophilus influenzae type b vaccine	36	melarsoprol	18
haloperidol	3, 39	meningococcal meningitis vaccine	37
halothane	1	<i>mercaptapurine</i>	22
heparin sodium	25, 26	<i>mesna</i>	22
hepatitis A vaccine	37	metformin	34
hepatitis B vaccine	36	<i>methadone</i>	40
HPV vaccine	36	<i>methotrexate</i>	23, 43
hydralazine	28	methyl dopa	28
hydrochlorothiazide	28, 29, 31	<i>methylprednisolone</i>	24
hydrocortisone	3, 24, 30, 32, 33	methylthioninium chloride (methylene blue)	4
hydroxocobalamin	25	metoclopramide	32
<i>hydroxycarbamide</i>	22, 26	metronidazole	9, 15
<i>hydroxychloroquine</i>	43	miconazole	29
hyoscine butylbromide	3	midazolam	1, 3, 5
hyoscine hydrobromide	3	<i>mifepristone</i>	39
ibuprofen	2, 18, 43	miltefosine	15
<i>ifosfamide</i>	22	misoprostol	38, 39
<i>imatinib</i>	22	morphine	1, 2
<i>imipenem + cilastatin</i>	8	mumps vaccine	37
influenza vaccine	37	mupirocin	30
insulin injection (soluble)	34	naloxone	4
intermediate-acting insulin	34	neostigmine	37
<i>intraperitoneal dialysis solution (of appropriate composition)</i>	39	nevirapine (NVP)	13
		niclosamide	6

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nicotinamide	42	rifabutin	10
nicotine replacement therapy (NRT)	40	rifampicin	9, 10
nifedipine	39	rifapentine	10
nifurtimox	18	risperidone	39
nitrofurantoin	9	ritonavir	13
nitrous oxide	1	<i>rituximab</i>	23
norethisterone enantate	34	rotavirus vaccine	36
<i>normal immunoglobulin</i>	27	rubella vaccine	36
nystatin	12	salbutamol	41
ofloxacin	37	salicylic acid	30
ombitasvir + paritaprevir + ritonavir	15	saquinavir (SQV)	13
omeprazole	32	selenium sulfide	29
ondansetron	3, 32	senna	3, 32
oral rehydration salts	33, 41	silver sulfadiazine	30
oseltamivir	14	simeprevir	14
<i>oxaliplatin</i>	23	simvastatin	29
<i>oxamniquine</i>	6	<i>sodium calcium edetate</i>	4
oxygen	1	sodium chloride	41
oxytocin	38	sodium fluoride	42
packed red blood cells	26	sodium hydrogen carbonate	41
<i>paclitaxel</i>	23	sodium lactate	41
<i>p-aminosalicylic acid</i>	11	sodium nitrite	4
<i>pancreatic enzymes</i>	31	<i>sodium nitroprusside</i>	28
paracetamol	2, 18	sodium stibogluconate or meglumine antimoniate	15
paromomycin	15	sodium thiosulfate	4, 29
<i>pegylated interferon alfa 2a</i>	15	sofosbuvir	14
penicillamine	4, 43	spectinomycin	9
<i>pentamidine</i>	17, 18	spironolactone	29, 31
permethrin	30	stavudine (d4T)	12
pertussis vaccine	36	<i>streptokinase</i>	29
phenobarbital	5	streptomycin	10, 11
phenoxymethylpenicillin	7	<i>succimer</i>	4
phenytoin	5	sulfadiazine	17
phytomenadione	26	sulfadoxine + pyrimethamine	17
pilocarpine	38	sulfamethoxazole + trimethoprim	9, 17
platelet concentrates	26	sulfasalazine	32, 43
pneumococcal vaccine	36	suramin sodium	18
podophyllum resin	30	<i>surfactant</i>	43
poliomyelitis vaccine	36	suxamethonium	37
potassium chloride	41	<i>tamoxifen</i>	25
potassium ferric hexacyano-ferrate(II) -2H <sub>2</sub> O (Prussian blue)	4	tenofovir disoproxil fumarate	12, 14
<i>potassium iodide</i>	12, 35	terbinafine	29
potassium permanganate	30	<i>testosterone</i>	33
povidone iodine	31	tetanus vaccine	36
praziquantel	6	tetracaine	38
prednisolone	4, 25, 38	tetracycline	37
primaquine	17	thiamine	42
procaine benzylpenicillin	7	<i>thioguanine</i>	23
<i>procarbazine</i>	23	tick-borne encephalitis vaccine	36
progesterone vaginal ring	34	timolol	38
proguanil	17	tranexamic acid	26
propofol	1	<i>trastuzumab</i>	23
propranolol	18	triclabendazole	6
propylthiouracil	35	trimethoprim	9
<i>prostaglandin E</i>	43	tropicamide	30
protamine sulfate	26	tuberculin, purified protein derivative (PPD)	35
pyrantel	6	typhoid vaccine	37
pyrazinamide	10	urea	30
<i>pyridostigmine</i>	37	valganciclovir	14
pyridoxine	42	valproic acid (sodium valproate)	5, 40
pyrimethamine	17	<i>vancomycin</i>	9
quinine	17	varicella vaccine	37
rabies immunoglobulin	26	vecuronium	37
rabies vaccine	37	verapamil	27, 28
ranitidine	32	<i>vinblastine</i>	23
retinol	42	<i>vincristine</i>	24
ribavirin	14, 15	<i>vinorelbine</i>	24
riboflavin	42	warfarin	26

# Essential Medicines

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water for injection	41	yellow fever vaccine	36
whole blood	26	zidovudine (ZDV or AZT)	12
xylometazoline	42	zinc sulfate	33