



**NATIONAL
ESSENTIAL MEDICINES
LIST OF PAKISTAN**

**Ministry of Health
Government of Pakistan
Islamabad**

2007

CONTENTS

PREFACE.....	i
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NATIONAL ESSENTIAL MEDICINES LIST FOURTH REVISION

Explanatory Notes	ii
1: ANAESTHETICS.....	1
1.1 General Anaesthetics and Oxygen.....	1
1.2 Local Anaesthetics.....	1
1.3 Preoperative medication and sedation for short term procedure.....	1
2: ANALGESICS, ANTIPYRETICS, NON- STEROIDAL ANTI-INFLAMMATORY MEDICINES, MEDICINES USED TO TREAT GOUT AND DISEASE MODIFYING AGENTS IN RHEMATOID DISORDERS.....	2
2.1 Non-Opioids and Non steroidal Anti inflammatory medicines.....	2
2.2 Opioid Analgesics	2
2.3 Medicines used to treat gout.....	2
2.4 Disease modifying agents used in rheumatoid disorders (DMARDs).....	2
3: ANTI-ALLERGICS AND MEDICINES USED IN ANAPHYLAXIS	3
4: ANTIDOTES AND OTHER SUBSTANCES USED IN POISONINGS.....	3
4.1 Non-specific.....	3
4.2 Specific.....	3
5: ANTICONVULSANTS/ANTIEPILEPTICS	4
6: ANTI-INFECTIVE MEDICINES	5
6.1 Anthelmintics	5
6.1.1 Intestinal Anthelminthics.....	5
6.2 Antibacterials.....	5
6.2.1 Beta Lactam medicines.....	5
6.2.2 Other Antibacterials.....	6
6.2.3 Antileprosy medicines.....	7
6.2.4 Antituberculosis medicines.....	7
6.3 Antifungal Medicines	9
6.4 Antiviral Medicines	9
6.4.1 Antiherpes Medicines.....	9

6.4.2	Antiretrovirals.....	9
6.4.2.1	Nucleoside/Nucleotide reverse transcriptase inhibitors.....	9
6.4.2.2	Non-nucleoside reverse transcriptase inhibitors.....	10
6.4.2.3	Protease Inhibitors.....	10
6.4.3	Other Antivirals.....	11
6.5	Antiprotozoal Medicines.....	11
6.5.1	Antiamoebic and Antigiardiasis Medicines.....	11
6.5.2	Antileishmaniasis Medicines.....	12
6.5.3	Antimalarial Medicines.....	12
6.5.3.1	For Curative Treatment.....	12
6.5.3.2	For Prophylaxis.....	13
6.5.4	Antipneumocystosis and Antitoxoplasmosis Medicines.....	13
7.	ANTIMIGRAINE MEDICINES.....	13
7.1	For Treatment of Acute Attack.....	13
7.2	For Prophylaxis.....	14
8.	ANTINEOPLASTIC, IMMUNOSUPPRESSIVES.....	14
8.1	Immunosuppressive Medicines.....	14
8.2	Cytotoxic Medicines.....	14
8.3	Hormones and Antihormones.....	15
9.	ANTIPARKINSONISM MEDICINES.....	15
10.	MEDICINES AFFECTING THE BLOOD.....	15
10.1	Antianaemia Medicines.....	15
10.2	Medicines Affecting Coagulation.....	15
11.	BLOOD PRODUCTS AND PLASMA SUBSTITUTES.....	16
11.1	Plasma Substitutes.....	16
11.2	Plasma Fractions for Specific Use.....	16
12.	CARDIOVASCULAR MEDICINES.....	16
12.1	Antianginal Medicines.....	16
12.2	Antiarrhythmic Medicines.....	16
12.3	Antihypertensive Medicines.....	17
12.4	Medicines Used in Heart Failure.....	18
12.5	Antithrombotic Medicines.....	18
12.6	Lipid-Lowering Agents.....	18
13.	DERMATOLOGICAL MEDICINES (TOPICAL).....	18
13.1	Antifungal medicines.....	18
13.2	Anti-Infective Medicines.....	19

13.3	Anti-Inflammatory and Antipruritic Medicines.....	19
13.4	Astringent Medicines.....	19
13.5	Medicines Affecting Skin Differentiation and Proliferation.....	19
13.6	Scabicides and Pediculicides.....	19
14.	DIAGNOSTIC AGENTS.....	20
14.1	Ophthalmic Medicines.....	20
14.2	Radiocontrast Media.....	20
15.	DISINFECTANTS AND ANTISEPTICS.....	20
15.1	Antiseptics.....	20
15.2	Disinfectants.....	20
16.	DIURETICS.....	20
17.	GASTROINTESTINAL MEDICINES.....	21
17.1	Antacids and other Antiulcer Medicines.....	21
17.2	Antiemetic Medicines.....	21
17.3	Anti-Inflammatory medicines.....	21
17.4	Laxatives.....	21
17.5	Medicines used in Diarrhoea.....	21
17.5.1	Oral Rehydration.....	21
17.5.2	Medicines for Diarrhoea in Children.....	22
17.5.3	Antidiarrhoeal (symptomatic) Medicines in Adults.....	22
18.	HORMONES, OTHER ENDOCRINE MEDICINES AND CONTRACEPTIVES.....	22
18.1	Androgens.....	22
18.2	Contraceptives.....	22
18.2.1	Oral Hormonal Contraceptives.....	22
18.2.2	Injectable Hormonal Contraceptives.....	23
18.2.3	Intrauterine Devices.....	23
18.2.4	Barrier Methods.....	23
18.2.5	Implantable Contraceptives.....	23
18.3	Estrogens.....	23
18.4	Insulins and other Antidiabetic Agents.....	23
18.5	Ovulation Inducers.....	23
18.6	Progestogens.....	24
18.7	Thyroid Hormones and Antithyroid Medicines.....	24
19.	IMMUNOLOGICALS.....	24
19.1	Diagnostic Agents.....	24
19.2	Sera and Immunoglobulins.....	24

19.3	Vaccines.....	25
20.	MUSCLE RELAXANTS (PERIPHERALLY-ACTING) AND CHOLINESTERASE INHIBITORS	26
21.	OPHTHALMOLOGICAL PREPARATIONS.....	26
21.1	Anti-Infective Agents.....	26
21.2	Anti-Inflammatory Agents.....	26
21.3	Local Anaesthetics.....	26
21.4	Miotics and Antiglaucoma Medicines.....	26
21.5	Mydriatics.....	26
22.	OXYTOCICS AND ANTIOXYTOCICS.....	27
22.1	Oxytocics.....	27
22.2	Antioxytocics (Tocolytics).....	27
23.	PERITONEAL DIALYSIS SOLUTION.....	27
24.	PSYCHOTHERAPEUTIC MEDICINES.....	27
24.1	Medicines used in Psychotic Disorders.....	27
24.2	Medicines used in Mood Disorders.....	27
24.2.1	Medicines used in Depressive Disorders.....	27
24.2.2	Medicines used in Bipolar Disorders.....	27
24.3	Medicines used in Generalized Anxiety and Sleep Disorders.....	28
24.4	Medicines used for Obsessive Compulsive Disorders and Panic Attacks.....	28
24.5	Medicines used in Substance Dependence Programmes.....	28
25.	MEDICINES ACTING ON THE RESPIRATORY TRACT.....	28
25.1	Antiasthmatic and Medicines for Chronic Obstructive Pulmonary Disease.....	28
25.2	Other Medicines Acting on the Respiratory Tract.....	28
26.	SOLUTIONS CORRECTING WATER, ELECTROLYTE AND ACID-BASE DISTURBANCES.....	29
26.1	Oral.....	29
26.2	Parenteral.....	29
26.3	Miscellaneous.....	29
27.	VITAMINS AND MINERALS.....	29
INDEX	31

PREFACE

After the second World War the development and emergence of miracle medicines like antibiotics brought a revolution in the medical care. The obvious effectiveness of these new pharmaceuticals and intensive marketing efforts combined to catalyze wide spread use of modern medicine. A rapidly growing and profitable industry, together with an enthusiastic but largely uninformed audience and an unregulated market, resulted in excess of promotion and consumption alongwith inflated level of expenditure. However, by 1970s it had become clear that least advantageous nations were not even meeting the basic needs of their people for essential life saving and health promoting medicines. As a result gradually a number of countries started concentrating on the development of a basic list of reliable medicines to meet the most vital basic needs of their people.

A World Health Organization (WHO) Committee of Experts met in 1977 to determine the number of medicines, which were actually needed to ensure a reasonable level of health care for as many people as possible. Consequently, the first Model List of Essential medicines was finalized in the same year. This list is being updated regularly by the WHO and is intended to be used as a guideline and provide basis for member countries to identify their own priorities and make their own selection. Through 1970s and 1980s the WHO started promotion of the concept of Essential medicines Program in order to redress this imbalance. The program aimed at reduction in the number of medicines purchased/used by the hospitals/institutions to a minimum possible level in order to make best use of limited public funds.

Essential medicines as defined by WHO are those that satisfy the health care needs of majority of the population. They should therefore be available at all times in adequate amounts and in the appropriate dosage forms.

The National Essential medicines List (NEML) of Pakistan was first prepared in 1994 in consultation with relevant experts. The list was previously reviewed in 1995, 2000 and 2003. The present list is the fourth revision containing 335 medicines of different pharmacological classes.

The health sector in general and public health sector in particular is expected to seriously consider adopting this list. The provincial health departments can play a pivotal role to encourage the hospitals/institutions for making bulk purchases from within this list. We hope that this list will find more acceptance among health care professionals.

Maj. Gen. ® Shahida Malik HI (M)

Director General Health

Explanatory Notes

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.

The **square box symbol** (☐) is primarily intended to indicate similar clinical performance within a pharmacological class.

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

Entries of the type *oral liquid* are intended to permit any solution, suspension or other form of liquid. Granules for reconstitution as an oral liquid may substitute for oral liquids, and typically carry 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.

Entries of the type *tablet* are intended to allow various forms of immediate-release tablet such as uncoated, film-coated, crushable, chewable, dispersible etc. Enteric coating, on the other hand, modifies drug release, and enteric-coated products are a modified release dosage form. Crushable, chewable and dispersible tablets may be easier to administer to paediatric populations and to the elderly.

1. ANAESTHETICS	
1.1 General anaesthetics and oxygen	
⊕ halothane	Inhalation.
ketamine	Injection: 50 mg (as hydrochloride)/ml in 10-ml vial.
nitrous oxide	Inhalation.
oxygen	Inhalation (medicinal gas).
⊕ thiopental	Powder for injection: 0.5 g; 1.0 g (sodium salt) in ampoule.
1.2 Local anaesthetics	
⊕ bupivacaine	Injection: 0.25%; 0.5% (hydrochloride) in vial. Injection for spinal anaesthesia: 0.5% (hydrochloride) in 4-ml ampoule to be mixed with 7.5% glucose solution.
⊕ lidocaine	Injection: 1%; 2% (hydrochloride) in vial. Injection for spinal anaesthesia: 5% (hydrochloride) in 2-ml ampoule to be mixed with 7.5% glucose solution. Topical forms: 2-4% (hydrochloride).
lidocaine + epinephrine (adrenaline)	Dental cartridge: 2% (hydrochloride) + epinephrine 1:80 000. Injection: 1%; 2% (hydrochloride) + epinephrine 1:200 000 in vial.
<i>Complementary List</i>	
<i>ephedrine</i>	Injection: 30 mg (hydrochloride)/ml in 1-ml ampoule. <i>(For use in spinal anaesthesia during delivery, to prevent hypotension).</i>
1.3 Preoperative medication and sedation for short-term procedures	
atropine	Injection: 1 mg (sulfate) in 1-ml ampoule.
⊕ diazepam	Injection: 5 mg/ml in 2-ml ampoule. Tablet: 5 mg.
morphine	Injection: 10 mg (sulfate or hydrochloride) in 1-ml ampoule.
promethazine	Oral liquid: 5 mg (hydrochloride)/5 ml.

2. ANALGESICS, ANTIPYRETICS, NON-STEROIDAL ANTI-INFLAMMATORY MEDICINES (NSAIMs), MEDICINES USED TO TREAT GOUT AND DISEASE MODIFYING AGENTS IN RHEUMATOID DISORDERS (DMARDs)	
2.1 Non-opioids and non-steroidal anti-inflammatory medicines (NSAIMs)	
acetylsalicylic acid	Suppository: 50-150 mg. Tablet: 100-500 mg.
ibuprofen	Tablet: 200 mg; 400 mg.
paracetamol*	Oral liquid: 125 mg/5 ml. Suppository: 100 mg. Tablet: 100-500 mg. * Not recommended for anti-inflammatory use due to lack of proven benefit to that effect.
diclofenac (as Sodium)	75 mg / 3 ml inj. (as sodium)
2.2 Opioid analgesics	
codeine	Tablet: 30 mg (phosphate).
morphine	Injection: 10 mg (morphine hydrochloride or morphine sulfate) in 1-ml ampoule. Oral liquid: 10 mg (morphine hydrochloride or morphine sulfate)/5 ml. Tablet: 10 mg (morphine sulfate). Tablet (prolonged release): 10 mg; 30 mg; 60 mg (morphine sulfate).
Pethidine	50 mg/ml inj. (as hydrochloride)
2.3 Medicines used to treat gout	
allopurinol	Tablet: 100 mg.
2.4 Disease modifying agents used in rheumatoid disorders (DMARDs)	
chloroquine	Tablet: 100 mg; 150 mg (as phosphate or sulfate).
<i>Complementary List</i>	
azathioprine	Tablet: 50 mg.
methotrexate	Tablet: 2.5 mg (as sodium salt).
penicillamine	Capsule or tablet: 250 mg.
sulfasalazine	Tablet: 500 mg.

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1.1 General anaesthetics and oxygen	
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promethazine	Oral liquid: 5 mg (hydrochloride)/5 ml.

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Pethidine	50 mg/ml inj. (as hydrochloride)
2.3 Medicines used to treat gout	
allopurinol	Tablet: 100 mg.
2.4 Disease modifying agents used in rheumatoid disorders (DMARDs)	
chloroquine	Tablet: 100 mg; 150 mg (as phosphate or sulfate).
<i>Complementary List</i>	
azathioprine	Tablet: 50 mg.
methotrexate	Tablet: 2.5 mg (as sodium salt).
penicillamine	Capsule or tablet: 250 mg.
sulfasalazine	Tablet: 500 mg.

3. ANTIALLERGICS AND MEDICINES USED IN ANAPHYLAXIS	
⊕ chlorphenamine	Injection: 10 mg (hydrogen maleate) in 1-ml ampoule. Tablet: 4 mg (hydrogen maleate).
dexamethasone	Injection: 4 mg dexamethasone phosphate (as disodium salt) in 1-ml ampoule.
epinephrine (adrenaline)	Injection: 1 mg (as hydrochloride or hydrogen tartrate) in 1-ml ampoule.
hydrocortisone	Powder for injection: 100 mg (as sodium succinate) in vial.
⊕ prednisolone*	Tablet: 5 mg; 25 mg * There is no evidence for complete clinical similarity between prednisolone and dexamethasone at high doses.

4. ANTIDOTES AND OTHER SUBSTANCES USED IN POISONINGS	
4.1 Non-specific	
charcoal, activated	Powder.
4.2 Specific	
acetylcysteine	Injection: 200 mg/ml in 10-ml ampoule.
atropine	Injection: 1 mg (sulfate) in 1-ml ampoule.
calcium gluconate	Injection: 100 mg/ml in 10-ml ampoule.
deferoxamine	Powder for injection: 500 mg (mesilate) in vial.
dimercaprol	Injection in oil: 50 mg/ml in 2-ml ampoule.
DL-methionine	Tablet: 250 mg.
methylthioninium chloride (methylene blue)	Injection: 10 mg/ml in 10-ml ampoule.
naloxone	Injection: 400 micrograms (hydrochloride) in 1-ml ampoule.
penicillamine	Capsule or tablet: 250 mg.
potassium ferric hexacyano-ferrate(II) $-2H_2O$ (Prussian blue)	Powder for oral administration.
sodium calcium edetate	Injection: 200 mg/ml in 5-ml ampoule.

sodium nitrite	Injection: 30 mg/ml in 10-ml ampoule.
sodium thiosulfate	Injection: 250 mg/ml in 50-ml ampoule.
5. ANTICONVULSANTS/ANTIEPILEPTICS	
carbamazepine	Oral liquid: 100 mg/5 ml. Tablet (chewable): 100 mg; 200 mg. Tablet (scored): 100 mg; 200 mg.
⊕ diazepam	Injection: 5 mg/ml in 2-ml ampoule (intravenous or rectal).
magnesium sulfate*	Injection: 500 mg/ml in 2-ml ampoule; 500 mg/ml in 10-ml ampoule. * For use in eclampsia and severe pre-eclampsia and not for other convulsant disorders.
phenobarbital	Injection: 200 mg/ml (phenobarbital sodium). Oral liquid: 15 mg/5 ml (as phenobarbital or phenobarbital sodium). Tablet: 15-100 mg (phenobarbital).
phenytoin	Capsule: 25 mg; 50 mg; 100 mg (sodium salt). Injection: 50 mg/ml in 5-ml vial (sodium salt). Oral liquid: 25 - 30 mg/5 ml.* Tablet: 25 mg; 50 mg; 100 mg (sodium salt). Tablet (chewable): 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	Oral liquid: 200 mg/5 ml. Tablet (crushable): 100 mg. Tablet (enteric-coated): 200 mg; 500 mg (sodium valproate).
Complementary List	
<i>ethosuximide</i>	Capsule: 250 mg. Oral liquid: 250 mg/5 ml.

6. ANTI-INFECTIVE MEDICINES	
6.1 Anthelmintics	
6.1.1 Intestinal anthelmintics	
albendazole	Tablet (chewable): 400 mg.
levamisole	Tablet: 50 mg; 150 mg (as hydrochloride).
⊕ mebendazole	Tablet (chewable): 100 mg; 500 mg.
niclosamide*	Tablet (chewable): 500 mg.
pyrantel	Oral liquid: 50 mg (as embonate)/ml. Tablet (chewable): 250 mg (as embonate).
ivermectin	Tablet (scored): 3 mg; 6 mg.
6.2 Antibacterials	
6.2.1 Beta Lactam medicines	
amoxicillin	Capsule or tablet: 250 mg; 500 mg (anhydrous). Powder for oral liquid: 125 mg (anhydrous)/5 ml.
amoxicillin + clavulanic acid	Tablet: 500 mg + 125 mg.
ampicillin	Powder for injection: 500 mg; 1 g (as sodium salt) in vial.
benzathine benzylpenicillin	Powder for injection: 1.44 g benzylpenicillin (=2.4 million IU) in 5-ml vial.
benzylpenicillin	Powder for injection: 600 mg (= 1 million IU); 3 g (= 5 million IU) (sodium or potassium salt) in vial.
cefazolin*	Powder for injection: 1 g (as sodium salt) in vial. * For surgical prophylaxis.
cefixime*	Capsule: 400 mg. * Only listed for single-dose treatment of uncomplicated ano-genital gonorrhoea.
⊕ cloxacillin	Capsule: 500 mg; 1 g (as sodium salt). Powder for injection: 500 mg (as sodium salt) in vial. Powder for oral liquid: 125 mg (as sodium salt)/5 ml.

phenoxymethylpenicillin	Powder for oral liquid: 250 mg (as potassium salt)/5 ml. Tablet: 250 mg (as potassium salt).
procaine benzylpenicillin	Powder for injection: 1 g (=1 million IU); 3 g (=3 million IU) in vial.

Complementary List	
ceftazidime	Powder for injection: 250 mg (as pentahydrate) in vial.
⊕ ceftriaxone	Powder for injection: 250 mg, 1 g (as sodium salt) in vial.
imipenem* + cilastatin*	Powder for injection: 250 mg (as monohydrate) + 250 mg (as sodium salt); 500 mg (as monohydrate) + 500 mg (as sodium salt) in vial. * Only listed for the treatment of life-threatening hospital-based infection due to suspected or proven multidrug-resistant infection.

6.2.2 Other antibacterials

azithromycin*	Capsule: 250 mg or 500 mg. Oral liquid: 200 mg/5 ml. * Only listed for single-dose treatment of genital <i>Chlamydia trachomatis</i> and of trachoma.
chloramphenicol	Capsule: 250 mg. Oily suspension for injection: 0.5 g (as sodium succinate)/ml in 2-ml ampoule. Oral liquid: 150 mg (as palmitate)/5 ml. Powder for injection: 1 g (sodium succinate) in vial.
⊕ ciprofloxacin*	Tablet: 250 mg (as hydrochloride). * Final selection depends on indication for use.
doxycycline*	Capsule or tablet: 100 mg (hydrochloride). * Final selection depends on indication for use.
⊕ erythromycin	Capsule or tablet: 250 mg (as stearate or ethyl succinate). Powder for injection: 500 mg (as lactobionate) in vial. Powder for oral liquid: 125 mg/ 5 ml (as stearate or ethyl succinate).
⊕ gentamicin*	Injection: 10 mg; 40 mg (as sulfate)/ml in 2-ml vial. * Final selection depends on indication for use.

⊕ metronidazole	Injection: 500 mg in 100-ml vial. Oral liquid: 200 mg (as benzoate)/5 ml. Suppository: 500 mg; 1 g. Tablet: 200-500 mg.
nitrofurantoin	Tablet: 100 mg.
spectinomycin	Powder for injection: 2 g (as hydrochloride) in vial.
sulfamethoxazole + trimethoprim	Injection: 80 mg + 16 mg/ml in 5-ml and 10-ml ampoules. Oral liquid: 200 mg + 40 mg/5 ml. Tablet: 100 mg + 20 mg; 400 mg + 80 mg.
trimethoprim	Tablet: 100 mg; 200 mg.
nalidixic acid	500 mg tablet, 300 mg / 5ml syrup. 5000,000 IU tab, 100,000 IU/ml drops, 100,000 IU pessaries
Complementary List	
<i>clindamycin</i>	Capsule: 150 mg. Injection: 150 mg (as phosphate)/ml.
<i>sulfadiazine</i>	Injection: 250 mg (sodium salt) in 4-ml ampoule. Tablet: 500 mg.

<i>vancomycin</i>	Powder for injection: 250 mg (as hydrochloride) in vial.
6.2.3 Antileprosy medicines	
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.	
clofazimine	Capsule: 50 mg; 100 mg.
dapsone	Tablet: 25 mg; 50 mg; 100 mg.
rifampicin	Capsule or tablet: 150 mg; 300 mg.
6.2.4 Antituberculosis medicines	
ethambutol	Tablet: 100-400 mg (hydrochloride).

isoniazid	Tablet: 100-300 mg. Tablet (scored): 50 mg.
isoniazid + ethambutol	Tablet: 150 mg + 400 mg.
pyrazinamide	Tablet: 400 mg. Tablet (dispersible): 150 mg. Tablet (scored): 150 mg.
rifampicin	Capsule or tablet: 150 mg; 300 mg.
rifampicin + isoniazid	Tablet: 60 mg + 30 mg; 150 mg + 75 mg; 300 mg + 150 mg. 60 mg + 60 mg (For intermittent use three times weekly). 150 mg + 150 mg (For intermittent use three times weekly).
rifampicin + isoniazid + ethambutol	Tablet: 150 mg + 75 mg + 275 mg.
rifampicin + isoniazid + pyrazinamide	Tablet: 60 mg + 30 mg + 150 mg; 150 mg + 75 mg + 400 mg. 150 mg + 150 mg + 500 mg (For intermittent use three times weekly).
rifampicin + isoniazid + pyrazinamide + ethambutol	Tablet: 150 mg + 75 mg + 400 mg + 275 mg.
streptomycin	Powder for injection: 1 g (as sulfate) in vial.

<i>Complementary List</i>	
<i>amikacin</i>	<i>Powder for injection: 1000 mg in vial.</i>
<i>p-aminosalicylic acid</i>	<i>Granules: 4 g in sachet.</i> <i>Tablet: 500 mg.</i>
<i>capreomycin</i>	<i>Powder for injection: 1000 mg in vial.</i>
<i>cycloserine</i>	<i>Capsule or tablet: 250 mg.</i>
<i>ethionamide</i>	<i>Tablet: 125 mg; 250 mg.</i>

<i>kanamycin</i>	Powder for injection: 1000 mg in vial.
<i>ofloxacin*</i>	Tablet: 200 mg; 400 mg. * <i>Levofloxacin may be an alternative based on availability and programme considerations.</i>
6.3 Antifungal medicines	
clotrimazole	Vaginal cream: 1%; 10%. Vaginal tablet: 100 mg; 500 mg.
☉ fluconazole	Capsule: 50 mg. Injection: 2 mg/ml in vial. Oral liquid: 50 mg/5 ml.
griseofulvin	Capsule or tablet: 125 mg; 250 mg.
nystatin	Lozenge: 100 000 IU. Pessary: 100 000 IU. Tablet: 100 000 IU; 500 000 IU.
<i>Complementary List</i>	
<i>amphotericin B</i>	Powder for injection: 50 mg in vial.
<i>flucytosine</i>	Capsule: 250 mg. Infusion: 2.5 g in 250 ml.
<i>potassium iodide</i>	Saturated solution.
6.4 Antiviral medicines	
6.4.1 Antiherpes medicines	
☉ aciclovir	Powder for injection: 250 mg (as sodium salt) in vial. Tablet: 200 mg.
6.4.2 Antiretrovirals	
6.4.2.1 Nucleoside/Nucleotide reverse transcriptase inhibitors	
abacavir (ABC)	Oral liquid: 100 mg (as sulfate)/5 ml. Tablet: 300 mg (as sulfate).

didanosine (ddI)	<p>Buffered powder for oral liquid: 100 mg; 167 mg; 250 mg packets.</p> <p>Capsule (unbuffered enteric-coated): 125 mg; 200 mg; 250 mg; 400 mg.</p> <p>Tablet (buffered chewable, dispersible): 25 mg; 50 mg; 100 mg; 150 mg; 200 mg.</p>
emtricitabine (FTC)*	<p>Capsule: 200 mg.</p> <p>Oral liquid: 10 mg/ml.</p> <p>* FTC is an acceptable alternative to 3TC, based on knowledge of the pharmacology, the resistance patterns and clinical trials of antiretrovirals.</p>
lamivudine (3TC)	<p>Oral liquid: 50 mg/5 ml.</p> <p>Tablet: 150 mg.</p>
stavudine (d4T)	<p>Capsule: 15 mg; 20 mg; 30 mg; 40 mg.*</p> <p>* The Committee expects this dosage form to be reviewed for possible deletion at the next meeting.</p> <p>Powder for oral liquid: 5 mg/5 ml.</p>
tenofovir disoproxil fumarate (TDF)	<p>Tablet: 300 mg (tenofovir disoproxil fumarate - equivalent to 245 mg tenofovir disoproxil).</p>
zidovudine (ZDV or AZT)	<p>Capsule: 100 mg; 250 mg.</p> <p>Oral liquid: 50 mg/5 ml.</p> <p>Solution for IV infusion injection: 10 mg/ml in 20-ml vial.</p> <p>Tablet: 300 mg.</p>
6.4.2.2 Non-nucleoside reverse transcriptase inhibitors	
efavirenz (EFV or EFZ)	<p>Capsule: 50 mg; 100 mg; 200 mg.</p> <p>Oral liquid: 150 mg/5 ml.</p> <p>Tablet: 600 mg.</p>
nevirapine (NVP)	<p>Oral liquid: 50 mg/5 ml.</p> <p>Tablet: 200 mg.</p>

6.4.2.3 Protease inhibitors

Ritonavir is recommended for use in combination as a pharmacological booster, and not as an antiretroviral in its own right.

indinavir (IDV)	Capsule: 200 mg; 333 mg; 400 mg (as sulfate).
lopinavir + ritonavir (LPV/r)	Capsule: 133.3 mg + 33.3 mg. Oral liquid: 400 mg + 100 mg/5 ml.
nelfinavir (NFV)	Oral powder: 50 mg/g. Tablet: 250 mg (as mesilate).
ritonavir	Oral liquid: 400 mg/5 ml. Oral solid dosage form: 100 mg.
saquinavir (SQV)	Capsule: 200 mg.
<i>FIXED-DOSE COMBINATIONS</i>	
efavirenz + emtricitabine* + tenofovir	Tablet: 600 mg + 200 mg + 300 mg. * FTC is an acceptable alternative to 3TC, based on knowledge of the pharmacology, the resistance patterns and clinical trials of antiretrovirals.
emtricitabine* + tenofovir	Tablet: 200 mg + 300 mg. * FTC is an acceptable alternative to 3TC, based on knowledge of the pharmacology, the resistance patterns and clinical trials of antiretrovirals.
stavudine + lamivudine + nevirapine	Tablet: 30 mg + 150 mg + 200 mg.
zidovudine + lamivudine	Tablet: 300 mg + 150 mg.
zidovudine + lamivudine + nevirapine	Tablet: 300 mg + 150 mg + 200 mg.
<i>6.4.3 Other antivirals</i>	
ribavirin	Injection for intravenous administration: 1000 mg and 800 mg in 10-ml phosphate buffer solution. Oral solid dosage forms: 200 mg; 400 mg; 600 mg.
<i>6.5 Antiprotozoal medicines</i>	
<i>6.5.1 Antiamoebic and anti giardiasis medicines</i>	
diloxanide	Tablet: 500 mg (furoate).

⌚ metronidazole	Injection: 500 mg in 100-ml vial. Oral liquid: 200 mg (as benzoate)/5 ml. Tablet: 200-500 mg.
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6.5.2 Antileishmaniasis medicines	
sodium stibogluconate (S)	100 mg inj.
<i>Complementary List</i>	
<i>amphotericin B</i>	<i>Powder for injection: 50 mg in vial.</i>
6.5.3 Antimalarial medicines	
6.5.3.1 For curative treatment	
Medicines for the treatment of <i>P. falciparum</i> malaria cases should be used in combination.	
amodiaquine*	Tablet: 153 mg or 200 mg (as hydrochloride). * To be used (a) in combination with artesunate 50 mg OR (b) may be used alone for the treatment of <i>P.vivax</i> , <i>P.ovale</i> and <i>P.malariae</i> infections.
artemether	Oily injection: 80 mg/ml in 1-ml ampoule. For use in the management of severe malaria.
artemether + lumefantrine*	Tablet: 20 mg + 120 mg. * Not recommended in the first trimester of pregnancy or in children below 5 kg.
artesunate*	Injection: ampoules, containing 60 mg anhydrous artesunic acid with a separate ampoule of 5% sodium bicarbonate solution. For use in the management of severe malaria. Tablet: 50 mg. * To be used in combination with either amodiaquine, mefloquine or sulfadoxine + pyrimethamine.
chloroquine*	Oral liquid: 50 mg (as phosphate or sulfate)/5 ml. Tablet: 100 mg; 150 mg (as phosphate or sulfate). * For use only for the treatment of <i>P.vivax</i> infection.

doxycycline*	<p>Capsule: 100 mg (as hydrochloride).</p> <p>Tablet (dispersible): 100 mg (as monohydrate).</p> <p>* For use only in combination with quinine.</p>
mefloquine*	<p>Tablet: 250 mg (as hydrochloride).</p> <p>* To be used in combination with artesunate 50 mg.</p>
primaquine*	<p>Tablet: 7.5 mg; 15 mg (as diphosphate)</p> <p>* 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>Injection: 300 mg quinine hydrochloride/ml in 2-ml ampoule.</p> <p>Tablet: 300 mg (quinine sulfate) or 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>Tablet: 500 mg + 25 mg.</p> <p>* Only in combination with artesunate 50 mg.</p>

6.5.3.2 For prophylaxis	
chloroquine*	<p>Oral liquid: 50 mg (as phosphate or sulfate)/5 ml.</p> <p>Tablet: 150 mg (as phosphate or sulfate).</p> <p>* For use only in central American regions, for use for <i>P.vivax</i>.</p>
doxycycline	Capsule or tablet: 100 mg (hydrochloride).
mefloquine	Tablet: 250 mg (as hydrochloride).
proguanil*	<p>Tablet: 100 mg (hydrochloride).</p> <p>* For use only in combination with chloroquine.</p>
6.5.4 Antipneumocystosis and antitoxoplasmosis medicines	
pyrimethamine	Tablet: 25 mg.
sulfamethoxazole + trimethoprim	Injection: 80 mg + 16 mg/ml in 5-ml ampoule; 80 mg + 16 mg/ml in 10-ml ampoule.
7. ANTIMIGRAINE MEDICINES	
7.1 For treatment of acute attack	
acetylsalicylic acid	Tablet: 300-500 mg.

paracetamol	Tablet: 300-500 mg.
7.2 For prophylaxis	
Ⓢ propranolol	Tablet: 20 mg; 40 mg (hydrochloride).
8. ANTINEOPLASTIC, IMMUNOSUPPRESSIVES	
8.1 Immunosuppressive medicines	
<i>Complementary List</i>	
azathioprine	<i>Powder for injection: 100 mg (as sodium salt) in vial. Tablet: 50 mg.</i>
ciclosporin	<i>Capsule: 25 mg. Concentrate for injection: 50 mg/ml in 1-ml ampoule for organ transplantation.</i>
8.2 Cytotoxic medicines	
<i>Complementary List</i>	
asparaginase	<i>Powder for injection: 10 000 IU in vial.</i>
bleomycin	<i>Powder for injection: 15 mg (as sulfate) in vial.</i>
calcium folinate	<i>Injection: 3 mg/ml in 10-ml ampoule. Tablet: 15 mg.</i>
chlorambucil	<i>Tablet: 2 mg.</i>
cisplatin	<i>Powder for injection: 10 mg; 50 mg in vial.</i>
cyclophosphamide	<i>Powder for injection: 500 mg in vial. Tablet: 25 mg.</i>
cytarabine	<i>Powder for injection: 100 mg in vial.</i>
dacarbazine	<i>Powder for injection: 100 mg in vial.</i>
dactinomycin	<i>Powder for injection: 500 micrograms in vial.</i>
daunorubicin	<i>Powder for injection: 50 mg (as hydrochloride) in vial.</i>
doxorubicin	<i>Powder for injection: 10 mg; 50 mg (hydrochloride) in vial.</i>
etoposide	<i>Capsule: 100 mg. Injection: 20 mg/ml in 5-ml ampoule.</i>
fluorouracil	<i>Injection: 50 mg/ml in 5-ml ampoule.</i>

<i>mercaptopurine</i>	Tablet: 50 mg.
<i>methotrexate</i>	Powder for injection: 50 mg (as sodium salt) in vial. Tablet: 2.5 mg (as sodium salt).
<i>procarbazine</i>	Capsule: 50 mg (as hydrochloride).
<i>vinblastine</i>	Powder for injection: 10 mg (sulfate) in vial.
<i>vincristine</i>	Powder for injection: 1 mg; 5 mg (sulfate) in vial.

8.3 Hormones and antihormones	
<i>Complementary List</i>	
<i>dexamethasone</i>	Injection: 4 mg dexamethasone phosphate (as disodium salt) in 1-ml ampoule.
<i>hydrocortisone</i>	Powder for injection: 100 mg (as sodium succinate) in vial.
⊕ <i>prednisolone</i> *	Tablet: 5 mg; 25 mg. * There is no evidence for complete clinical similarity between prednisolone and dexamethasone at high doses.
<i>tamoxifen</i>	Tablet: 10 mg; 20 mg (as citrate).
9. ANTIPARKINSONISM MEDICINES	
procyclidine (S), (T)	5 mg. tab.
levodopa + ⊕	Tablet: 100 mg + 10 mg; 250 mg + 25 mg.
10. MEDICINES AFFECTING THE BLOOD	
10.1 Antianaemia medicines	
ferrous salt	Oral liquid: equivalent to 25 mg iron (as sulfate)/ml. Tablet: equivalent to 60 mg iron.
ferrous salt + folic acid	Tablet equivalent to 60 mg iron + 400 micrograms folic acid (Nutritional supplement for use during pregnancy).
folic acid	Tablet: 1 mg; 5 mg.
hydroxocobalamin	Injection: 1 mg in 1-ml ampoule.
10.2 Medicines affecting coagulation	

heparin sodium	Injection: 1000 IU/ml; 5000 IU/ml; 20,000 IU/ml in 1-ml ampoule.
phytomenadione	Injection: 10 mg/ml in 5-ml ampoule. Tablet: 10 mg.
protamine sulfate	Injection: 10 mg/ml in 5-ml ampoule.
⊕ warfarin	Tablet: 1 mg; 2 mg; 5 mg (sodium salt).
11. BLOOD PRODUCTS AND PLASMA SUBSTITUTES	
11.1 Plasma substitutes	
⊕ dextran 70*	Injectable solution: 6%. * Polygeline, injectable solution, 3.5% is considered as equivalent.
11.2 Plasma fractions for specific use	
All plasma fractions should comply with the WHO Requirements for the Collection, Processing and Quality Control of Blood, Blood Components and Plasma Derivatives.	
<i>Complementary List</i>	
<i>human normal immunoglobulin</i>	Intramuscular administration: 16% protein solution. Intravenous administration: 5%, 10% protein solution.
⊕ factor VIII concentrate	Dried.
⊕ factor IX complex (coagulation factors, II, VII, IX, X) concentrate	Dried.
12. CARDIOVASCULAR MEDICINES	
12.1 Antianginal medicines	
⊕ atenolol	Tablet: 50 mg; 100 mg.
glyceryl trinitrate	Tablet (sublingual): 500 micrograms.
⊕ isosorbide dinitrate	Tablet (sublingual): 5 mg.
verapamil	Tablet: 40 mg; 80 mg (hydrochloride).
12.2 Antiarrhythmic medicines	

This subsection will be reviewed at the next meeting of the Expert Committee.	
⊕ atenolol	Tablet: 50 mg; 100 mg.
digoxin	Injection: 250 micrograms/ml in 2-ml ampoule. Oral liquid: 50 micrograms/ml. Tablet: 62.5 micrograms; 250 micrograms.
epinephrine (adrenaline)	Injection: 100 micrograms/ml (as acid tartrate or hydrochloride) in 10-ml ampoule.
lidocaine	Injection: 20 mg (hydrochloride)/ml in 5-ml ampoule.

verapamil	Injection: 2.5 mg (hydrochloride)/ml in 2-ml ampoule. Tablet: 40 mg; 80 mg (hydrochloride).
Complementary List	
⊕ procainamide	Injection: 100 mg (hydrochloride)/ml in 10-ml ampoule.
⊕ quinidine	Tablet: 200 mg (sulfate).
12.3 Antihypertensive medicines	
⊕ amlodipine	Tablet: 5 mg.
⊕ atenolol	Tablet: 50 mg; 100 mg.
⊕ enalapril	Tablet: 2.5 mg.
hydralazine*	Powder for injection: 20 mg (hydrochloride) in ampoule. Tablet: 25 mg, 50 mg (hydrochloride). * Hydralazine is listed for use in the acute management of severe pregnancy-induced hypertension only. Its use in the treatment of essential hypertension is not recommended in view of the availability of more evidence of efficacy and safety of other medicines.
⊕ hydrochlorothiazide	Tablet (scored): 25 mg.

methyldopa*	Tablet: 250 mg. * Methyldopa is listed for use in the management of pregnancy-induced hypertension only. Its use in the treatment of essential hypertension is not recommended in view of the availability of more evidence of efficacy and safety of other medicines.
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Complementary List

sodium nitroprusside	Powder for infusion: 50 mg in ampoule.
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12.4 Medicines used in heart failure

This subsection will be reviewed at the next meeting of the Expert Committee.

digoxin	Injection: 250 micrograms/ml in 2-ml ampoule. Oral liquid: 50 micrograms/ml. Tablet: 62.5 micrograms; 250 micrograms.
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⊕ enalapril	Tablet: 2.5 mg.
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⊕ furosemide	Injection: 10 mg/ml in 2-ml ampoule. Tablet: 40 mg.
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⊕ hydrochlorothiazide	Tablet (scored): 25 mg.
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Complementary List

dopamine	Injection: 40 mg/ml (hydrochloride) in 5-ml vial.
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dobutamine (T)	250 mg inj.
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12.5 Antithrombotic medicines

acetylsalicylic acid	Tablet: 100 mg.
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Complementary List

streptokinase	Powder for injection: 1.5 million IU in vial.
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12.6 Lipid-lowering agents

⊕ simvastatin*	Tablet: 5 mg; 10 mg; 20 mg; 40 mg. * For use in high-risk patients.
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13. DERMATOLOGICAL MEDICINES (topical)

13.1 Antifungal medicines

benzoic acid + salicylic acid	Ointment or cream: 6% + 3%.
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⊕ miconazole	Ointment or cream: 2% (nitrate).
sodium thiosulfate	Solution: 15%.
<i>Complementary List</i>	
<i>selenium sulfide</i>	<i>Detergent-based suspension:</i> 2%.
13.2 Anti-infective medicines	
⊕ methylrosanilinium chloride (gentian violet)	Aqueous solution: 0.5%. Tincture: 0.5%.
neomycin sulfate + ⊕ bacitracin	Ointment: 5 mg neomycin sulfate + 250 IU bacitracin zinc/g.
potassium permanganate	Aqueous solution: 1:10 000.
silver sulfadiazine	Cream: 1%, in 500-g container.
13.3 Anti-inflammatory and antipruritic medicines	
⊕ betamethasone	Ointment or cream: 0.1% (as valerate).
⊕ calamine lotion	Lotion.
⊕ hydrocortisone	Ointment or cream: 1% (acetate).
13.4 Astringent medicines	
aluminium diacetate	Solution: 5%.
13.5 Medicines affecting skin differentiation and proliferation	
benzoyl peroxide	Lotion or cream: 5%.
coal tar	Solution: 5%.
dithranol	Ointment: 0.1%-2%.
fluorouracil	Ointment: 5%.
⊕ podophyllum resin	Solution: 10-25%.
salicylic acid	Solution: 5%.
urea	Ointment or cream: 10%.
13.6 Scabicides and pediculicides	
⊕ benzyl benzoate	Lotion: 25%.

permethrin	Cream: 5%. Lotion: 1%.
14. DIAGNOSTIC AGENTS	
14.1 Ophthalmic medicines	
fluorescein	Eye drops: 1% (sodium salt).
⊕ tropicamide	Eye drops: 0.5%.
14.2 Radiocontrast media	
⊕ amidotrizoate	Injection: 140-420 mg iodine (as sodium or meglumine salt)/ml in 20-ml ampoule.
barium sulfate	Aqueous suspension.
⊕ iohexol	Injection: 140-350 mg iodine/ml in 5-ml; 10-ml; 20-ml ampoules.
<i>Complementary List</i>	
⊕ meglumine iotroxate	Solution: 5-8 g iodine in 100-250 ml.
15. DISINFECTANTS AND ANTISEPTICS	
15.1 Antiseptics	
⊕ chlorhexidine	Solution: 5% (digluconate) for dilution.
⊕ ethanol	Solution: 70% (denatured).
⊕ polyvidone iodine	Solution: 10%.
15.2 Disinfectants	
⊕ chlorine base compound	Powder: (0.1% available chlorine) for solution.
⊕ chloroxylenol	Solution: 4.8%.
glutaral	Solution: 2%.
16. DIURETICS	
amiloride	Tablet: 5 mg (hydrochloride).
⊕ furosemide	Injection: 10 mg/ml in 2-ml ampoule. Tablet: 40 mg.
⊕ hydrochlorothiazide	Tablet (scored): 25 mg.
mannitol	Injectable solution: 10%; 20%.

spironolactone	Tablet: 25 mg.
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17. GASTROINTESTINAL MEDICINES

17.1 Antacids and other antiulcer medicines

aluminium hydroxide	Oral liquid: 320 mg/5 ml. Tablet: 500 mg.
⊕ ranitidine	Injection: 25 mg/ml in 2-ml ampoule. Oral liquid: 75 mg/5 ml. Tablet: 150 mg (as hydrochloride).
magnesium hydroxide	Oral liquid: equivalent to 550 mg magnesium oxide/10 ml.
Lactulose	3.5mg/ 5ml syrup
Omeprazole	20 mg cap.

17.2 Antiemetic medicines

metoclopramide	Injection: 5 mg (hydrochloride)/ml in 2-ml ampoule. Tablet: 10 mg (hydrochloride).
promethazine	Injection: 25 mg (hydrochloride)/ml in 2-ml ampoule. Oral liquid: 5 mg (hydrochloride)/5 ml. Tablet: 10 mg; 25 mg (hydrochloride).

17.3 Anti-inflammatory medicines

⊕ sulfasalazine	Retention enema. Suppository: 500 mg. Tablet: 500 mg.
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Complementary List

⊕ hydrocortisone	Retention enema. Suppository: 25 mg (acetate). (the ⊕ only applies to hydrocortisone retention enema).
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17.4 Laxatives

⊕ senna	Tablet: 7.5 mg (sennosides) (or traditional dosage forms).
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17.5 Medicines used in diarrhoea

17.5.1 Oral rehydration

oral rehydration salts*	<p>glucose: 75 mEq sodium: 75 mEq or mmol/l chloride: 65 mEq or mmol/l potassium: 20 mEq or mmol/l citrate: 10 mmol/l osmolarity: 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 only recommended when manufactured for immediate use.</p> <p>* In cases of cholera a higher concentration of sodium may be required.</p>
17.5.2 Medicines for diarrhoea in children	
zinc sulfate*	<p>Oral liquid: in 10 mg per unit dosage forms.</p> <p>Tablet: in 10 mg per unit dosage forms.</p> <p>* In acute diarrhoea zinc sulfate should be used as an adjunct to oral rehydration salts.</p>
17.5.3 Antidiarrhoeal (symptomatic) medicines in adults	
codeine*	Tablet: 30 mg (phosphate).
18. HORMONES, OTHER ENDOCRINE MEDICINES AND CONTRACEPTIVES	
18.1 Adrenal hormones and synthetic substitutes	
Addison's disease is a rare condition; adrenal hormones are already included in section 3.	
18.1 Androgens	
<i>Complementary List</i>	
<i>testosterone</i>	Injection: 200 mg (enantate) in 1-ml ampoule.
18.2 Contraceptives	
18.2.1 Oral hormonal contraceptives	
⊕ ethinylestradiol + ⊕ levonorgestrel	Tablet: 30 micrograms + 150 micrograms.

⊕ ethinylestradiol + ⊕ norethisterone	Tablet: 35 micrograms + 1.0 mg.
levonorgestrel	Tablet: 30 micrograms; 750 micrograms (pack of two); 1.5 mg.

18.2.2 Injectable hormonal contraceptives

medroxyprogesterone acetate	Depot injection: 150 mg/ml in 1-ml vial.
medroxyprogesterone acetate + estradiol cypionate	Injection: 25 mg + 5 mg.
norethisterone enantate	Oily solution: 200 mg/ml in 1-ml ampoule.

18.2.3 Intrauterine devices

copper-containing device	
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18.2.4 Barrier methods

condoms	
diaphragms	

18.2.5 Implantable contraceptives

levonorgestrel-releasing implant	Two-rod levonorgestrel-releasing implant, each rod containing 75 mg of levonorgestrel (150 mg total).
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18.3 Estrogens

⊕ ethinylestradiol*	Tablet: 10 micrograms; 50 micrograms. * The public health relevance and/or comparative efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the expert Committee.
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18.4 Insulins and other antidiabetic agents

glibenclamide	Tablet: 2.5 mg; 5 mg.
insulin injection (soluble)	Injection: 100 IU/ml in 10-ml vial.
intermediate-acting insulin	Injection: 40 IU/ml in 10-ml vial; 100 IU/ml in 10-ml vial (as compound insulin zinc suspension or isophane insulin).
metformin	Tablet: 500 mg (hydrochloride).

18.5 Ovulation inducers

<i>Complementary List</i>	
<i>clomifene</i>	Tablet: 50 mg (citrate).
18.6 Progestogens	
norethisterone*	Tablet: 5 mg. * The public health relevance and/or comparative efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the expert Committee.

<i>Complementary List</i>	
<i>medroxyprogesterone acetate*</i>	Tablet: 5 mg. * The public health relevance and/or comparative efficacy and/or safety of this item has been questioned and its continued inclusion on the list will be reviewed at the next meeting of the expert Committee.

18.7 Thyroid hormones and antithyroid medicines	
levothyroxine	Tablet: 50 micrograms; 100 micrograms (sodium salt).
potassium iodide	Tablet: 60 mg.
⊕ propylthiouracil	Tablet: 50 mg.

19. IMMUNOLOGICALS

19.1 Diagnostic agents	
tuberculin, purified protein derivative (PPD)	Injection.

19.2 Sera and immunoglobulins

All plasma fractions should comply with the WHO Requirements for the Collection, Processing and Quality Control of Blood, Blood Components and Plasma Derivatives.	
anti-D immunoglobulin (human)	Injection: 250 micrograms in single-dose vial.
antitetanus immunoglobulin (human)	Injection: 500 IU in vial.
antivenom immunoglobulin*	Injection. * Exact type to be defined locally.
diphtheria antitoxin	Injection: 10 000 IU; 20 000 IU in vial.

Ⓢ rabies immunoglobulin	Injection: 150 IU/ml in vial.
Anti hepatitis B immunoglobulin	injectin.
19.3 Vaccines	
Vaccine for Universal Immunization	
BCG (dried) vaccine	inj
diphtheria-pertussis tetanus vaccine	inj.
dipatheria-tetanus vaccine	inj.
measles-mumps-rubella vaccine	inj.
measles vaccine	inj.
poliomyelitis vaccine	oral solution, live attenuated
tetanus vaccine	inj.
Haemophilus influenzae type B vaccine	inj.
Rota virus vaccine	inj.
Typhoid Vaccines	inj.
Vaccines for Specific Use.	
Hepatitis A vaccine	inj
hepatitis B vaccine	inj.
meningococcal vaccine	inj.
rabies vaccine	inj.
rubella vaccine	inj
Cholera Vaccines	inj
Flu vaccine (influenza)	inj
Pneumococcal vaccine	inj

20. MUSCLE RELAXANTS (PERIPHERALLY-ACTING) AND CHOLINESTERASE INHIBITORS	
⊕ alcuronium	Injection: 5 mg (chloride)/ml in 2-ml ampoule.
neostigmine	Injection: 500 micrograms in 1-ml ampoule; 2.5 mg (metilsulfate) in 1-ml ampoule. Tablet: 15 mg (bromide).
suxamethonium	Injection: 50 mg (chloride)/ml in 2-ml ampoule. Powder for injection (chloride) in vial.
<i>Complementary List</i>	
pyridostigmine	Injection: 1 mg in 1-ml ampoule. Tablet: 60 mg (bromide).
⊕ vecuronium	Powder for injection: 10 mg (bromide) in vial.

21. OPHTHALMOLOGICAL PREPARATIONS	
This section will be reviewed at the next meeting of the Expert Committee.	
21.1 Anti-infective agents	
aciclovir	Ointment: 3% W/W.
⊕ gentamicin*	Solution (eye drops): 0.3% (sulfate). * Final selection depends on indication for use.
⊕ tetracycline	Eye ointment: 1% (hydrochloride).
21.2 Anti-inflammatory agents	
⊕ prednisolone	Solution (eye drops): 0.5% (sodium phosphate).
21.3 Local anaesthetics	
⊕ tetracaine	Solution (eye drops): 0.5% (hydrochloride).
21.4 Miotics and antiglaucoma medicines	
acetazolamide	Tablet: 250 mg.
⊕ pilocarpine	Solution (eye drops): 2%; 4% (hydrochloride or nitrate).
⊕ timolol	Solution (eye drops): 0.25%; 0.5% (as maleate).
21.5 Mydriatics	
atropine	Solution (eye drops): 0.1%; 0.5%, 1% (sulfate).
<i>Complementary List</i>	

<i>epinephrine (adrenaline)</i>	<i>Solution (eye drops): 2% (as hydrochloride).</i>
22. OXYTOCICS AND ANTIOXYTOCICS	
22.1 Oxytocics	
⊕ ergometrine	Injection: 200 micrograms (hydrogen maleate) in 1-ml ampoule.
oxytocin	Injection: 10 IU in 1-ml ampoule.
22.2 Antioxytocics (tocolytics)	
nifedipine	Immediate release capsule: 10 mg.

23. PERITONEAL DIALYSIS SOLUTION	
<i>Complementary List</i>	
<i>intraperitoneal dialysis solution (of appropriate composition)</i>	<i>Parenteral solution.</i>
24. PSYCHOTHERAPEUTIC MEDICINES	
24.1 Medicines used in psychotic disorders	
⊕ chlorpromazine	Injection: 25 mg (hydrochloride)/ml in 2-ml ampoule. Oral liquid: 25 mg (hydrochloride)/5 ml. Tablet: 100 mg (hydrochloride).
⊕ fluphenazine	Injection: 25 mg (decanoate or enantate) in 1-ml ampoule.
⊕ haloperidol	Injection: 5 mg in 1-ml ampoule. Tablet: 2 mg; 5 mg.
24.2 Medicines used in mood disorders	
24.2.1 Medicines used in depressive disorders	
⊕ amitriptyline	Tablet: 25 mg (hydrochloride).
fluoxetine	Capsule or tablet: 20 mg (present as hydrochloride).
24.2.2 Medicines used in bipolar disorders	
carbamazepine	Tablet (scored): 100 mg; 200 mg.
lithium carbonate	Capsule or tablet: 300 mg.

valproic acid	Tablet (enteric-coated): 200 mg; 500 mg (sodium valproate).
Risperidone	1 mg, 2 mg, 3 mg tab.
24.3 Medicines used in generalized anxiety and sleep disorders	
⊕ diazepam	Tablet (scored): 2 mg; 5 mg.
24.4 Medicines used for obsessive compulsive disorders and panic attacks	
clomipramine	Capsule: 10 mg; 25 mg (hydrochloride).
24.5 Medicines used in substance dependence programmes	
<i>Complementary List</i>	
⊕ methadone*	<p>Concentrate for oral liquid: 5 mg/ml; 10 mg/ml (hydrochloride).</p> <p>Oral liquid: 5 mg/5 ml; 10 mg/5 ml.</p> <p>* The square box is added to include buprenorphine. The medicines should only be used within an established support programme.</p>
25. MEDICINES ACTING ON THE RESPIRATORY TRACT	
25.1 Antiasthmatic and medicines for chronic obstructive pulmonary disease	
⊕ beclometasone	Inhalation (aerosol): 50 micrograms per dose (dipropionate); 250 micrograms (dipropionate) per dose.
epinephrine (adrenaline)	Injection: 1 mg (as hydrochloride or hydrogen tartrate) in 1-ml ampoule.
ipratropium bromide	Inhalation (aerosol): 20 micrograms/metered dose.
⊕ salbutamol	<p>Inhalation (aerosol): 100 micrograms (as sulfate) per dose.</p> <p>Injection: 50 micrograms (as sulfate)/ml in 5-ml ampoule.</p> <p>Oral liquid: 2 mg/5 ml.</p> <p>Respirator solution for use in nebulizers: 5 mg (as sulfate)/ml.</p> <p>Tablet: 2 mg; 4 mg (as sulfate).</p>
25.2 Other medicines acting on the respiratory tract	

aminophylline	100 & 200 mg tab. 250 mg inj.
theophylline	180 & 270 mg tab. 350 mg tab. (S.R) 120 mg/5ml syrup.
26. SOLUTIONS CORRECTING WATER, ELECTROLYTE AND ACID-BASE DISTURBANCES	
26.1 Oral	
oral rehydration salts	See section 17.5.1.
potassium chloride	Powder for solution.
26.2 Parenteral	
glucose	Injectable solution: 5%; 10% isotonic; 50% hypertonic.
glucose with sodium chloride	Injectable solution: 4% glucose, 0.18% sodium chloride (equivalent to Na ⁺ 30 mmol/l, Cl ⁻ 30 mmol/l).
potassium chloride	Solution: 11.2% in 20-ml ampoule (equivalent to K ⁺ 1.5 mmol/ml, Cl ⁻ 1.5 mmol/ml).
sodium chloride	Injectable solution: 0.9% isotonic (equivalent to Na ⁺ 154 mmol/l, Cl ⁻ 154 mmol/l).
sodium hydrogen carbonate	Injectable solution: 1.4% isotonic (equivalent to Na ⁺ 167 mmol/l, HCO ₃ ⁻ 167 mmol/l). Solution: 8.4% in 10-ml ampoule (equivalent to Na ⁺ 1000 mmol/l, HCO ₃ ⁻ 1000 mmol/l).
⊕ sodium lactate, compound solution	Injectable solution.
26.3 Miscellaneous	
water for injection	2-ml; 5-ml; 10-ml ampoules.
27. VITAMINS AND MINERALS	
ascorbic acid	Tablet: 50 mg.
⊕ ergocalciferol	Capsule or tablet: 1.25 mg (50 000 IU). Oral liquid: 250 micrograms/ml (10 000 IU/ml).

iodine	<p>Capsule: 200 mg.</p> <p>Iodized oil: 1 ml (480 mg iodine); 0.5 ml (240 mg iodine) in ampoule (oral or injectable); 0.57 ml (308 mg iodine) in dispenser bottle.</p>
⊕ nicotinamide	Tablet: 50 mg.
pyridoxine	Tablet: 25 mg (hydrochloride).
retinol	<p>Capsule: 50 000 IU; 100 000 IU; 200 000 IU (as palmitate).</p> <p>Oral oily solution: 100 000 IU (as palmitate)/ml in multidose dispenser.</p> <p>Tablet (sugar-coated): 10 000 IU (as palmitate).</p> <p>Water-miscible injection: 100 000 IU (as palmitate) in 2-ml ampoule.</p>
riboflavin	Tablet: 5 mg.
sodium fluoride	In any appropriate topical formulation.
thiamine	Tablet: 50 mg (hydrochloride).
<i>Complementary List</i>	
<i>calcium gluconate</i>	Injection: 100 mg/ml in 10-ml ampoule.

INDEX

Abacavir (ABC).....
Acetazolamide.....
Acetylcysteine.....
Acetylsalicylic acid.....
Aciclovir.....
Albendazole.....
Alcuronium.....
Allopurinol.....
Aluminium diacetate.....
Aluminium hydroxide.....
Amidotrizoate.....
Amikacin.....
Amiloride.....
Aminophylline.....
Amitriptyline.....
Amlodipine.....
Amodiaquine.....
Amoxicillin.....
Amoxicillin + clavulanic acid.....
Amphotericin B.....
Ampicillin.....
Anti-D immunoglobulin (human).....
Anti Hepatitis B Immunoglobulin.....
Antitetanus immunoglobulin (human).....
Antivenom immunoglobulin.....
Artemether.....
Artemether + lumefantrine.....
Artesunate.....
Ascorbic acid.....
Asparaginase.....
Atenolol.....
Atropine.....
Azathioprine.....
Azithromycin.....
Bacitracin.....
Barium sulfate.....
BCG (dried) vaccine

Beclometasone.....
Benzathine benzylpenicillin.....
Benznidazole.....
Benzoic acid.....
Benzoic acid + salicylic acid.....
Benzoyl peroxide.....
Benzyl benzoate.....

Benzylpenicillin.....
Betamethasone.....
Bleomycin.....
Bupivacaine.....
Calamine lotion.....
Calcium folinate.....
Calcium gluconate.....
Capreomycin.....
Carbamazepine.....
Carbidopa.....
Cefazolin.....
Cefixime.....
Ceftazidime.....
Ceftriaxone.....
Charcoal, activated.....
Chlorambucil.....
Chloramphenicol.....
Chlorhexidine.....
Chlorine base compound.....
Chloroquine.....
Chloroxylenol.....
Chlorphenamine.....
Chlorpromazine.....
Cholera Vaccine.....
Ciclosporin.....
Cilastatin.....
Ciprofloxacin.....
Cisplatin.....
Clavulanic acid.....
Clindamycin.....
Clofazimine.....
Clomifene.....
Clomipramine.....
Clotrimazole.....
Cloxacillin.....
Coal tar.....
Codeine.....
Condoms.....
Copper-containing device.....
Cyclophosphamide.....
Cycloserine.....
Cytarabine.....
Dacarbazine.....
Dactinomycin.....
Dapsone.....
Daunorubicin.....
Deferoxamine.....

Dexamethasone.....
Dextran 70.....
Diaphragms.....
Diazepam.....
Didanosine (ddi).....
Digoxin.....
Diloxanide.....
Dimercaprol.....
Diphtheria antitoxin.....
Diphtheria-pertussis tetanus vaccine.....
Diphtheria-tetanus vaccine.....
Dithranol.....
DL-methionine.....
Dobutamine.....
Dopamine.....
Doxorubicin.....
Doxycycline.....
Efavirenz.....
Efavirenz + emtricitabine + tenofovir.....
Eflornithine.....
Emtricitabine.....
Emtricitabine + tenofovir.....
Enalapril.....
Ephedrine.....
Epinephrine (adrenaline).....
Ergocalciferol.....
Ergometrine.....
Erythromycin.....
Estradiol cypionate.....
Ethambutol.....
Ethanol.....
Ethinylestradiol.....
Ethinylestradiol + levonorgestrel.....
Ethinylestradiol + norethisterone.....
Ethionamide.....
Ethosuximide.....
Etoposide.....
Factor IX complex (coagulation factors, II, VII, IX, X) oncentrate.....
Factor VIII concentrate.....
Ferrous salt.....
Ferrous salt + folic acid.....
Fluconazole.....
Flucytosine.....
Fluorescein.....
Fluorouracil.....
Fluoxetine.....
Fluphenazine.....

Flu vaccine (influenza)
Folic acid.....
Furosemide.....
Gentamicin.....
Gentian violet.....
Glibenclamide.....
Glucose.....
Glutaral.....
Glyceryl trinitrate.....
Griseofulvin.....
Haemophilus influenzae type B vaccine.....
Haloperidol.....
Halothane.....
Hepatitis A vaccine.....
Hepatitis B vaccine
Heparin sodium.....
Human normal immunoglobulin.....
Hydralazine.....
Hydrochlorothiazide.....
Hydrocortisone.....
Hydroxocobalamin.....
Ibuprofen.....
Imipenem + cilastatin.....
Immunoglobulin.....
Indinavir (IDV).....
Insulin injection (soluble).....
Intermediate-acting insulin.....
Intraperitoneal dialysis solution (of appropriate composition).....
Iodine.....
Iohexol.....
Ipratropium bromide.....
Isoniazid.....
Isoniazid + ethambutol.....
Isosorbide dinitrate.....
Ivermectin.....
Kanamycin.....
Ketamine.....
Lactulose.....
Lamivudine.....
Lamivudine (3TC).....
Levamisole.....
Levodopa.....
Levodopa + carbidopa.....
Levonorgestrel.....
Levonorgestrel-releasing implant.....
Levothyroxine.....
Lidocaine.....

Lidocaine + epinephrine (adrenaline).....
Lithium carbonate.....
Lopinavir.....
Lopinavir + ritonavir (LPV/r).....
Lumefantrine.....
Magnesium hydroxide.....
Magnesium sulfate.....
Mannitol.....
Measles-mumps-rubella vaccine.....
Measles vaccine
Mebendazole.....
Medroxyprogesterone acetate.....
Medroxyprogesterone acetate + estradiol cypionate.....
Mefloquine.....
Meglumine iotroxate.....
Melarsoprol.....
Meningococcal vaccine
Mercaptopurine.....
Metformin.....
Methadone.....
Methotrexate.....
Methyldopa.....
Methylene blue.....
Methylrosanilinium chloride (gentian violet).....
Methylthioninium chloride (methylene blue).....
Metoclopramide.....
Metronidazole.....
Miconazole.....
Morphine.....
Nalidixic acid.....
Naloxone.....
Nelfinavir (NFV).....
Neomycin sulfate.....
Neomycin sulfate + bacitracin.....
Neostigmine.....
Nevirapine.....
Niclosamide.....
Nicotinamide.....
Nifedipine.....
Nifurtimox.....
Nitrofurantoin.....
Nitrous oxide.....
Norethisterone.....
Nystatin.....
Ofloxacin.....
Omeprazole.....
Oral rehydration salts.....

Oxygen.....
Oxytocin.....
P-aminosalicylic acid.....
Paracetamol.....
Penicillamine.....
Permethrin.....
Pethidine.....
Phenobarbital.....
Phenoxymethylpenicillin.....
Phenytoin.....
Phytomenadione.....
Pilocarpine.....
Pneumococcal vaccine.....
Podophyllum resin.....
Poliomyelitis vaccine oral solution (live attenuated).....
Polyvidone iodine.....
Potassium chloride.....
Potassium ferric hexacyano-ferrate(II) $-2H_2O$ (Prussian blue).....
Potassium iodide.....
Potassium permanganate.....
Prednisolone.....
Primaquine.....
Procainamide.....
Procaine benzylpenicillin.....
Procarbazine.....
Procyclidine.....
Proguanil.....
Promethazine.....
Propranolol.....
Propylthiouracil.....
Protamine sulfate.....
Prussian blue.....
Pyrantel.....
Pyrazinamide.....
Pyridostigmine.....
Pyridoxine.....
Pyrimethamine.....
Quinidine.....
Quinine.....
Rabies immunoglobulin.....
Rabies vaccine.....
Ranitidine.....
Retinol.....
Ribavirin.....
Riboflavin.....
Rifampicin.....

Rifampicin + isoniazid.....
Rifampicin + isoniazid + ethambutol.....
Rifampicin + isoniazid + pyrazinamide.....
Rifampicin + isoniazid + pyrazinamide + ethambutol.....
Risperidone.....
Ritonavir.....
Rota virus vaccine.....
Rubella vaccine.....
Salbutamol.....
Salicylic acid.....
Saquinavir (SQV).....
Selenium sulfide.....
Senna.....
Silver sulfadiazine.....
Simvastatin.....
Sodium calcium edetate.....
Sodium chloride.....
Sodium fluoride.....
Sodium hydrogen carbonate.....
Sodium lactate.....
Sodium nitrite.....
Sodium nitroprusside.....
Sodium stibogluconate.....
Sodium thiosulfate.....
Sodium valproate.....
Spectinomycin.....
Spironolactone.....
Stavudine.....
Stavudine + lamivudine + nevirapine.....
Streptokinase.....
Streptomycin.....
Sulfadiazine.....
Sulfadoxine.....
Sulfadoxine + pyrimethamine.....
Sulfamethoxazole.....
Sulfamethoxazole + trimethoprim.....
Sulfasalazine.....
Suxamethonium.....
Tamoxifen.....
Tenofovir disoproxil fumarate.....
Testosterone.....
Tetanus vaccine

Tetracaine.....
Tetracycline.....
Theophylline.....
Thiamine.....
Thiopental.....

Timolol.....
Trimethoprim.....
Tropicamide.....
Typhoid Vaccines.....
Tuberculin, purified protein derivative (PPD).....
Urea.....
Valproic acid.....
Vancomycin.....
Vecuronium.....
Verapamil.....
Vinblastine.....
Vincristine.....
Warfarin.....
Water for injection.....
Yellow fever vaccine.....
Zidovudine.....
Zidovudine + lamivudine.....
Zidovudine + lamivudine + nevirapine.....
Zinc sulfate.....