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Other Notifications, Orders etc.

Government of Pakistan

Ministry of National Health Services, Regulations and Coordination

(Drug Regulatory Authority of Pakistan)

NOTIFICATION

Islamabad, the 06th June, 2018

F.No.9-13/2016-DDC(P).- The Drug Regulatory Authority of Pakistan with the approval of its Policy Board and the Federal Government is pleased to establish the following drug pricing mechanism as specified in sub-clause (vii) of clause (c) of section 7 read with caluse (a) of sub-section (1) of Section 11 of the Drug Regulatory Authority of Pakistan Act, 2012 (XXI of 2012). The mechanism is termed as Drug Pricing Policy-2018.

1. Commencement and application.-

(1) This Policy shall come into force at once.

(2) This Policy shall be applicable to the allopathic drugs including biologicals, for human use only.

2. Definitions.-

(1) In this Policy, unless there is anything repugnant in the subject or context.-

(i) "Act" means the Drugs Act, 1976 (XXXI of 1976);

(ii) "Active pharmaceutical ingredient (API)" means a substance or compound that is intended to be used in the manufacture of a pharmaceutical product as a pharmacologically active compound (ingredient);

(iii) "Authority" means the Drug Regulatory Authority of Pakistan established under section 3 of the DRAP Act, 2012;

(iv) "Biosimilar biological drug" means Similar Biotherapeutic Product (SPB) which is similar in terms of quality, safety and efficacy to an already licensed biotherapeutic product:

(v) "CPI" means Consumer Price Index published by Pakistan Bureau of Statistics.

(vi) "DRAP Act" means the Drug Regulatory Authority of Pakistan Act, 2012 (XXI of 2012);

(vii) "decision" includes an order, determination or direction of the Authority or the Policy Board or the Drug Pricing Committee or any other committee made in accordance with the applicable laws, rules and regulations;

(viii) "distributor" means an authorized distributor of a manufacturer or importer having a valid drug sale license of wholesale or distribution;

(ix) "drug" means a drug registered under section 7 of the Act read with Section 7 of the DRAP, Act, 2012.

(x) "Drug Pricing Committee" means the committee constituted under section 10 and sub-section (3) of section 12 of the Act, read with clause (a) of section 7 of the DRAP Act;

(xi) Essential Drugs and Biologicals" means the drugs and biologicals included in the National Essential Medicine List published by the Authority and as updated or revised from time to time;

(xii) "fee" means fee prescribed by the Authority or the Policy Board, as the case may be;

(xiii) "formulation" means all operations involved in converting a drug into a final pharmaceutical dosage form ready for use as a finished drug including compounding, processing, formulating, filling, packing, finishing, labelling and other like processes;

(xiv) "Quintilies IMS data" means information of pharmaceutical market in Pakistan compiled by IQVIA, an organization which provides pharmaceutical market information globally;

(xv) "label" means a display of written, printed or graphic matter upon the immediate container, or the outside container or wrapper of a drug package;

(xvi) "landed cost" includes import price converted in Pakistani rupee, freight, custom duty, income tax paid at import stage, insurance, bank charges, clearing charges, civil aviation charges or other import levies, if any;

(xvii) "MRP" means the maximum retail price of a drug fixed by the Federal Government under section 12 of the Act read with Section 7 of the DRAP Act, 2012;

(xviii) "National Essential Medicine List" means the list of essential drugs and biologicals published by the Authority as updated or revised from time to time in accordance with WHO list of essential medicines;

(xix) "NCE/NBE" means the new chemical entity / new biological entity that has not been registered in the same dosage form, strength and delivery system in Pakistan;

(xx) "Originator Brand" means a branded drug containing a new chemical entity through research and development;

(xxi) "Policy Board" means the Policy Board of the Authority constituted under section 9 of the DRAP Act;

(xxii) "pharmacopoeia" means publications named in sub-clause (ii) of clause (z) of Section 3 of the Act;

(xxiii) "retailers discount" means the discount to a licensed pharmacy or chemist or medical store calculated at the rate of fifteen per cent on maximum retail price printed on the pack of the drug, which shall not exceed maximum retail price fixed by the Authority with the approval of the Federal Government;

(xxiv) "trade price" means price after deducting retailer discount from the maximum retail price fixed under section 12 of the Act;

(xxv) "sell" means sell, offer for sale, expose for sale, have in possession for sale and distribution and "to sell", "sold" or "sale" shall be construed accordingly;

(xxvi) "storage" means storage for sale and "to store" or "stored" shall be construed accordingly; and

(xxvii) "wholeseller or distribution" means sale to a person who purchases for the purpose of selling again and includes sale to a retailer or hospital or dispensary, or to medical, educational or research institute.

(2) The terms used but not defined herein shall have the same meaning as are assigned to it by the Act or the DRAP Act.

3. Basis of pricing.-

(1) MRPs of all drugs including biologicals shall be fixed and regulated subject to procedures as specified in this policy.

(2) Drugs for human use shall be divided in two categories in terms of pricing in the country:-

i. Drugs and biologicals on National Essential Medicines List

ii. All other drugs

(3) List of drugs and biologicals in National Essential Medicines List may be revised after three years or earlier as deemed appropriate by the Authority in accordance with WHO list of essential medicines.

(4) MRP of a generic shall not, at any time, exceed the MPR of the respective Originator Brand except those cases where the Originator Brand has itself requested for de-registration or it is confirmed from the manufacturer or importer of the Originator Brand that they can no longer ensure the availability of the same due to the non-viability of the product;

(5) No person including a retailer, hospital, clinic, wholeseller or distributor shall sell any drug to any consumer at a price exceeding the MRP printed on the respective pack. In case of sale of a drug in loose quantity, MRP shall not exceed the pro-rata MRP printed on the respective pack.

(6) No person including a manufacturer, importer, retailer, hospital, clinic, wholeseller or distributor shall be allowed to affix stickers, overlapping or masking of prices. However, in case of voluntary reduction in MRP, masking of previous MRP and reprinting of reduced MRP through laser inkjet will be permissible, if so requested.

4. MRP fixation of NCEs and NBEs.-

(1) MRP fixation of Originator Brand of NCE & NBE in a particular dosage form, strength & delivery system shall be based on average price of the same dosage form and strength of the same brand in India and Bangladesh. If the Originator Brand is available in only one of these countries, MRP shall be fixed at its par after considering the exchange rate parity.

(2) If Originator Brand of NCE or NBE has not been marketed in India or Bangladesh, its maximum retail price shall be fixed as under:

i. Average retail price of a basket of countries, namely; Indonesia, Philippines, Lebanon, Sri Lanka and Malaysia. If the Originator Brand is not available in all these countries, MRP shall be fixed at average retail price of the country(ies) in which Originator Brand is available; or if not available

ii. MRP of Originator Brand of NCE / NBE shall be fixed equal to average of the whole sale /procurement price available in the following:

a. UK Monthly Index of Medical Supplies or British National Formulary (BNF),

b. Australian Pharmaceutical Benefits Scheme

c. New Zealand Pharmaceutical Management Agency;

d. If whole sale /procurement price is not available in any one or two of the above references, MRP shall be fixed at average of the whole sale /procurement price which is available in the remaining one or two references; or if not available.

iii. MRP of Originator Brand of NCE / NBE shall be fixed on the basis of trade price in the country of origin and grossed up for 15% retailer margin; or if not available MRP calculated on the basis of formula in paragraph 9 or demanded MRP, whichever is lower.

(3) Prices of new chemical entities in other countries shall be verified from any one of the independent sources as under.-

(i) price information available on the official website of the regulatory authority or any authentic evidence to prove the retail price fixed by the regulatory authority of the respective country; or

(ii) price information available in UK Monthly Index of Medical Supplies or British National Formulary or Australian Pharmaceutical Benefits Scheme or New Zealand Pharmaceutical Management Agency; or

(iii) if price is not available as above, price of the same brand as certified directly to Division of Costing & Pricing, DRAP by any of the following agencies or organizations.-

(a) Pakistan High Commission or Pakistan Embassy in the respective country; or

(b) Any of top four global firms of chartered accountants operating in Pakistan through their member firms in the respective countries.

(c) IQVIA. Since IQVIA maintains information on trade prices globally, it shall certify trade price in the respective country.

(d) A format shall be devised by the DRAP to obtain the certified information on price (inclusive and exclusive of VAT, Sales Tax, Excise duty or any other levy on sale of the drug) under sub-clauses (a), (b) & (c) above.

(4) MRPs of generics of NCEs or NBEs.-

(i) MRP of generics shall be fixed at 30% less than the MRP of the Originator Brand, however, it may be reduced to 20% in cases wherein compliance in respect of the regulatory requirements is established. This may include the establishment of Research and Development laboratories, submission of stability studies and comparative dissolution studies and the encouragement of cGMP compliance for local manufacturers. MRP so fixed shall be applicable to in respect of an NCE or NBE of all generic substitutes and not a particular brand.

(ii) if Originator Brand of an NCE is not marketed in Pakistan and a generic substitute is registered for marketing, its MRP shall be fixed at 30% less than the Originator Brand MRP as per provisions of sub-paras (1) & (2) of para 4 and price verified as per provisions of sub-para (3) of para 4.

(iii) if Originator Brand is not registered in Pakistan and its price information is not available as per provisions of sub-paras (1) & (2) of para 4, MRP of generic substitutes registered in Pakistan shall be fixed at average price in India (ceiling price of the drug fixed by the regulatory authority and if ceiling price is not available, retail price of the highest priced generic) and Bangladesh (retail price of the highest priced generic) and price shall be verified as per provisions of sub-para (3) of para-4;

(iv) if Originator Brand is not registered in Pakistan and price information of Originator Brand and generics is not available in India & Bangladesh; MRP shall be fixed at average retail pirce of the highest priced generics of the basket of countries as listed in paragraph 4 (2)(i).

(5) After expiry of 6 years or till the time of entry of at least 3 generics / biosimilars in the market, whichever is later, maximum retail price of the Originator Brand of NCE / NBE shall be reduced by 10% per annum for 3 consecutive years (cumulative reduction of 30%). MRP of any generic shall be at least 15% less than the MRP of Originator Brand so reduced. However, if the average of the Originator Brand price in India and Bangladesh is lower by between 0% to 30% the price will be revised by that difference.

(6) MRP of specialized dosage forms and existing drug molecules with new delivery systems shall be dealt under the provisions of reference pricing method under this para. However, in case of any clarification which may be required by the Drug Pricing Committee, Registration Board being technical forum for this purpose will give its opinion.

5. MRPs of new strengths or new pack sizes.-

(1) MRPs of new strengths of already registered drugs shall be fixed by applying the following formulae.-

(i) Calculation of MRP of lower strength (new strength is of half of the existing strength)

MRP = MRP of higher strength - 40%; and

(ii) Calculation of MRP of higher strength (new strength is double of the existing strength)

MRP = (MRP of lower strength x100) /60.

(2) MRPs of other strengths shall be calculated proportionately to formula in sub-para (1) above.

(3) MRPs of changed or additional pack sizes of existing drugs shall be calculated on pro-rata basis of already fixed MRP of the existing pack size of an oral dosage form or topical preparation or pack size with different number of injections of the respective drug / brand. In case the new pack size is 2 times of the existing pack size, MRP of new pack size, after calculation of pro-rata MRP, shall be reduced by 2% and 4% reduction shall be applied if new pack size is triple or larger of the existing pack size.

(4) Pharmaceutical concern may apply for additional / changed pack size of their existing registered drugs as specified in sub-para (3) above to the DRAP (Division of Costing and Pricing) and a confirmation of filing of application & calculation of MRP in accordance with the Policy will be issued within 60 days of submission of the application. In case of any correction or deficiency, the pharmaceutical concern shall make the correction within 30 days and resubmit the calculations and document. If no intimation or advice is sent to the applicant within 60 days, the applicant may market the additional or changed pack size at MRP calculated in accordance with this Policy.

(5) MRPs of drugs containing combination of already registered drugs will be sum of MRPs of individual drugs and sum total reduced by 5%.

6. Reduction in MRP of Originator Brand.-

(1) MRPs of Originator Brands of drugs & biologicals listed in National Essential Medicne List shall be reduced by 10% per annum for 3 consecutive years (cumulative reduction of 30%) of MRPs as fixed by the Federal Government except the following.-

(i) Where less than 3 generics are available in the market;

(ii) Lower priced Originator Brands as defined in para 10.

(iii) Originator Brand where average retail price (exclusive of vat, sales tax, excise duty or any other levy on sale of the drug) of the same brand in India and Bangladesh is higher at the time of reduction. In case, the Originator Brand is available in one of these countries, retail price (exclusive of vat, sales tax, excise duty or any other levy on sale of the drug) in that country shall be taken as reference for this purpose. If average price of the Originator Brand in India & Bangladesh is lower by between 0% and 30% then MRP will be reduced by that difference and simultaneously will be netted off over the applicable annual increase under this Policy. In case the Originator Brand is available in one of these countries, retail price in that country will be taken as reference for this purpose.

(iv) Where Originator Brand has not been marketed in India or Bangladesh its MRP is not higher than the lowest of the following, namely.-

(a) Retail price (exclusive of VAT, Sales Tax, Excise Duty or any other levy on sale of the drug) in basket of countries as listed in para 4(2)(i);

(b) Whole sale price in UK Monthly Index of Medical Supplies or British National Formulary or Australian Pharmaceutical Benefits Scheme or New Zealand Pharmaceutical Management Agency (exclusive of VAT, Sales Tax, Excise Duty or any other levy on sale of the drug); and

(c) Originator Brands for which bona fide hardship application are under review.

(2) If MRP of any Originator Brand has already been reduced or frozen for 15 or more years by the Federal Government or the manufacturer or importer itself, any such earlier reduction or freeze by the Federal Government or the manufacturer or importer itself shall be adjusted while calculating reduction under sub-para (1). However, annual increase linked with CPI shall not be granted to such Originator Brands from years 2015 to 2019. Thereafter, from July, 2019 these Originator Brands will be entitled to such annual increase.

(3) MRP of any generic shall be at least 15% less than the MRP of Originator Brand so reduced under sub-para (1) and generics where lower MRPs have been fixed shall not be allowed to increase their MRPs except any increase as expressly allowed under this Policy.

7. Annual adjustment in MRPs of drugs.-

(1) Annual increase in MRPs of drugs has been linked with CPI of the immediately preceding financial year.

(2) Effective 1st July 2018, manufacturers and importers may, without prior approval, increase their existing MRPs of essential drugs/biologicals (excluding lower priced) equal to 70% increase in CPI (with a cap of 7%) and MRPs of all other drugs/biologicals and lower priced drugs up to increase in CPI (with a cap of 10%) subject to the following conditions:

i. Calculations of revised MRPs, duly signed and stamped by the Managing Director or Managing Partner or CEO or any authorized person on his behalf, shall be submitted along with evidence for authenticity of existing MRPs to the Authority (Division of Costing and Pricing) at least 30 days prior to affecting the increase. Non intimation of MRPs shall be construed as non-revision of MRPs. The failure to intimate the increase in MRP shall tantamount to nullifying the price increase;

ii. Revised price list shall be submitted in hard copy and uploaded on the DRAP's website or as prescribed by the Authority from time to time;

iii. No manufacturer, importer, retailer, hospital, clinic, wholeseller or distributor shall be allowed to affix stickers, overlapping or masking of prices;

iv. The price increase shall not be applicable on the batches manufactured before affecting the increase under this paragraph. No recall of drugs of already marketed batches shall be allowed; and

v. The revised MRPs shall be printed on the label in the manner prescribed by the Drugs (Labeling and Packing) Rules, 1986.

8. MRPs fixation of new entrants.-

(1) MRPs of the generic(s)/biosimilar(s) fixed by the Drug Pricing Committee of the Authority or Drug Pricing Committee or Price Advisory Committee or Price Recommendatory Committee of the Ministry of Health (defunct) shall be applicable to new entrants of the same drug. However, the manufacturer or importer may submit calculations of its MRP with DRAP, (Division of Costing & Pricing) to adjust MRP notified on registration letter under sub-rule (4) of rule 29 of the Dugs (Licensing, Registration and Advertising) Rules, 1976 with applicable rate of increase or decrease on the basis of CPI as allowed under Drug Pricing Policy-2015 or this Policy subject to conditions laid down in para 7 of this Policy.

(2) MRPs of new entrants of the drugs already available in the market which have not been fixed so far by the Drug Pricing Committee of the Authority or Drug Pricing Committee or Price Advisory Committee or Price Recommendatory Committee of the Ministry of Health (defunct) shall be fixed at the time of registration according to the following parameters.-

(i) MRP of generic(s)/biosimilar(s) shall be fixed at 30% of the MRP of the Originator, however, it may be reduced to 20% in cases wherein compliance in respect of the regulatory requirements is established. This may include the establishment of Research and Development laboratories, submission of stability studies and comparative dissolution studies and the encouragement of cGMP compliance for local manufacturers. MRP so fixed shall be applicable to in respect of all generic substitutes and not a particular brand.

(ii) In case generic(s)/biosimilar(s) of a drug are already available in the market but MRP of the drug has not been fixed so far by any of the above said committee, MRP shall be fixed at the highest MRP of a generic brand of the same drug/biological already available in the market.

(3) If strength of drug(s) in a tablet is equal, same MRP will be fixed for its all coated and un-coated forms.

(4) If strength of drug(s) in a capsule as powder or pellets is equal, same MRP will be fixed for its all hard forms.

(5) If strength of drug(s) in a liquid oral dosage form is equal, same MRP will be fixed for its all liquid dosage forms.

(6) If strength of drug(s) in otic or ophthalmic or nasal dosage form is equal, same MRP will be fixed for its all liquid dosage forms.

(7) If strength of drug(s) in a topical dosage form (gel/cream/ointment/paste/lotion/liquid) is equal, same MRP will be fixed for equal pack sizes in grams/milliliters etc.

(8) If contents of drug(s) in an injection is equal, same MRP will be fixed for its vial or ampoule irrespective of its filling in glass or plastic or Low Density Polyethylene (LDPE) or any other material upto 20ml pack size.

(9) If strength of drug(s) in a tablet or capsule in a modified release form is equal, same MRP will be fixed for its all modified (sustained/ extended/ delayed /core coated / prolong /slow) release forms.

(10) If MRP is fixed for base, then same MRP will be considered for the salt as approved by reference regulatory authorities as adopted by the Registration Board.

9. Hardship cases:-

(1) Hardship case of a drug means a situation in which a manufacturer or importer of a drug is unable to recover its costs and the profit margin as per the formula set out in this Paragraph (which deals with hardship cases).

(2) Notwithstanding anything contained in this Policy, a manufacturer or importer may apply to the Authority, once in 3 years, after payment of the prescribed fee for a review of MRP of any of its drug whose actual material cost or import cost justify increase as per method given here under. The application shall be filed on specified format and supported with justification, evidence and reasons to increase the MRP.

(i) Formulae

For locally manufactured drugs:

MRP = (Cost of active materials + excipients + cost of packing materials) x factor as under:

Category	Factor
All oral types of drugs (except antibiotics & birth control pills) and topical preparations	2.40
All types of oral antibiotics, antiviral, anti-fungal and anti-infective drugs	2.45
Sustained release tablet /capsule	2.95
All sterile preparations and birth control pills	2.95
Dispersible tablets	3.15
All aseptic preparations	3.55
Steroids and hormones	3.55

For imported drugs:

Trade Price = Landed cost + mark-up @ 45% provided that in case of anti-cancer, biologicals, immunosupressants and anti-retroviral drugs, the mark up shall be 40%.

For imported drugs in finished form and local labelling & cartoning

Trade Price = (Landed cost + packaging cost) + mark-up @ 45% provided that in case of anti-cancer, biologicals, immunosupressants and anti-retroviral drugs, the mark up shall be 40%.

(ii) In case of imported drugs in finished form and finished import & local packaging, MRP shall be calculated by grossing up trade price to provide for retail discount @ 15%.

(3) Cost of raw and packaging materials and imported finished drugs will be as per actual of applicant. In case of locally produced raw materials, evidence of actual price as per commercial invoice and in case of packaging material, actual price as per sale tax invoice will be submitted along with application. In case of imported raw and packaging materials and finished drug, evidence of value as determined on bill of entry under the Customs Act, 1969 along with commercial invoice and import documents will be submitted.

(4) MRP of an Originator Brand shall not be increased over and above its average retail price (exclusive of VAT, GST, Excise Duty or any other levy on sale of drug) in India and Bangladesh or retail price in any of these countries if available only in one country or if Originator Brand is not available in any of these countries, MRP of Originator Brand shall not be increased over & above its retail price in other reference countries as per mechanism provided in paragraph 4 of this Policy.

(5) All new hardship applications filed after issuance of this Policy shall be decided within 180 days of submission of the hardship case on the specified form and complete in all respect with the DRAP (Division of Costing and Pricing) in manner as specified in this Policy. In case, no response is sent to the applicant of hardship case under provisions of this para within 180 days, the applicant may increase its MRP upto maximum of 10% on the existing approved MRP and inform the DRAP (Division of Costing and Pricing) with evidence that a complete case was submitted with the DRAP (Division of Costing and Pricing) provided that the applicant must have sent a reminder to DRAP 30 days before the expiry of the 180 days period. Further provided that if the matter has been referred by DRAP to the

Federal Government within the aforesaid 180 days and the notification is not issued within a further period of 90 days (i.e. within a period of 270 days from the date of the submission of the hardship application) then the applicant may increase its MRP upto the level recommended by the DPC of DRAP to the Federal Government. For this purpose, DRAP will share the minutes of the relevant meeting with the applicant upon the expiry of 180 days after the submission of the hardship application. No applicant shall exercise this option more than once in 3 years.

10. Lower priced drugs.-

(1) The drugs whose MRPs are less than the following threshold shall be deemed to be other drugs even otherwise falling under the category of essential drugs to encourage their production:

a. Rs.3.11/- per tablet / capsule / respule / caplet

b. Rs.3.11/- 5ml of syrup /suspension/elixir

c. Rs.3.11/- per patch

d. Rs.6.21/- per sachet

e. Rs.15.53/- per injection

f. Rs.3.11/- per 1 gm of cream/ ointment/ gel (non sterile) subject to maximum pack size of 20gm.

g. Rs.4.14/- per 1 gm of cream/ ointment/ gel (sterile) subject to maximum pack size of 20gm

h. Rs.4.14/- per ml of eye/ ear /nasal drops /nasal spray / inhalation solution (sterile) subject to maximum pack size of 10ml.

(2) Threshold limit of lower priced drugs shall increase by equal to CPI every year.

11. Encouragement for exports to USA & Europe.-

(1) The locally manufactured products approved for export to developed countries like USA, UK, EU countries, Japan, Australia or WHO shall be exempted from price control in local market to encourage manufacturing and export of quality drugs subject to the conditions that FOB price for export is not less than the ex-factory price in the country.

(2) This exemption shall stand withdrawn when export to such countries is discontinued for more than 12 months.

12. Miscellaneous.-

(1) MRPs fixed under this Policy for locally manufactured drugs shall also be applicable to imported drugs.

(2) Any manufacturer or importer may voluntarily adjust the MRP downward of its registered drug any time and he may reverse the downward adjustment subject to MRP fixed by the Federal Government. However, he shall intimate such adjustment to the Authority (Division of Costing and Pricing) prior to effecting the change.

(3) The Authority and the provincial health authorities shall monitor MRPs of all the drugs to ensure that drugs are not sold in market on MRPs higher than fixed under this Policy.

(4) If MRP of any drug or biological is not covered in the policy then its case shall be presented before the Policy Board which shall regulate the mechanism for the fixation of MRP of such drug or biological.

(5) The MRPs fixed for any generic substitute will be applicable to, and in respect of, a molecule or combination of molecules of such generic substitutes, and not a particular brand. This will be applicable to all cases of anomalies of MRPs which shall be dealt with and addressed in the aforementioned manner.

(6) MRP of registered brand of a drug will remain same in case of its de-registration from name of its existing registration holder to its registration in the name of new applicant provided that the existing price is within approved maximum retail price of that brand and any pending application as hardship case under this Policy by earlier registration holder shall deemed to be a pending aplication for new registration holder.

(7) DPC will decide all cases in accordance with the provisions of this Policy and on the basis of material & evidence produced before it.

(8) The Policy Board may for reasons to be recorded in writing, recommend to the Federal Government that the MRP of a drug or class of drugs may be fixed or reduced or raised in modification of this Policy.

Appendix-I

National Essential Medicine List of Pakistan 2016			
Therapeutic category	**Sr#**	**Generic Drug Name**	**Formulations**
1.Anaesthetics			
1.1 General anaesthetics and oxygen			
1.1.1 Inhalational medicines	1	halothane	Inhalation.
	2	isoflurane	Inhalation.
	3	nitrous oxide	Inhalation.
	4	oxygen	Inhalation (medicinal gas).
1.1.2 Injectable medicines	5	thiopentone	Powder for injecction 500mg 1.0 gm (sodium salt)in Ampolules
	6	ketamine	injection containing ketamine hydrochloride : 50mg/ ml in 10- ml vial.
	7	propofol	Injection: 10 mg/ ml; 20 mg/ ml.
1.2 Local anaesthetics			
	8	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.
	9	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.
			Gel Lignocaine Hcl 2% w/v 15gm tube
	10	lidocaine + epinephrine (adrenaline)	Dental cartridge: 2% (hydrochloride) + epinephrine 1:80 000.
			Injection: 1%; 2% (hydrochloride or sulfate) + epinephrine 1:200 000 in vial.
	11	ephedrine	Injection: 30 mg (hydrochloride)/ ml in 1- ml ampoule. (For use in spinal anaesthesia during delivery, to prevent hypotension).
1.3 Preoperative medication and sedation for short-term procedures			
	12	atropine	Injection: 1 mg (sulfate) in 1- ml ampoule.
	13	midazolam	Injection: 1 mg/ ml.
			Oral liquid: 2 mg/ ml
			Tablet: 7.5 mg; 15 mg.
	14	morphine	Injection: 10 mg (sulfate or hydrochloride) in 1- ml ampoule.

2. Medicines for Pain & Palliative care			
2.1.Non-opioids analgeics,antipyretics and non-steroidal anti-inflammatory medicines (NSAIMs)			
	15	acetylsalicylic acid	Suppository: 50 mg to 150 mg.
			Tablet:Aspirin 75mg enteric coated tab/ Blister
	16	ibuprofen	Susp. Ibuprofen 100mg/5ml Bottle
			Tab. Ibuprofen 400mg Blister a Not in children less than 3 months.
	17	paracetamol	Syp. Paracetamol 120 mg /5 ml,Bottle
			Suppository: 100 mg.
			Injection: 150mg / ml
	18	diclofenac sodium	Tablet 50mg
			injection 75mg/5ml
2.2.opioids analgesics			
	19	codeine	Tablet: 30 mg (phosphate).
		morphine	Granules (slow-release; to mix with water): 20 mg – 200 mg (morphine sulfate).
			Injection: 10 mg (morphine hydrochloride or morphine sulphate in 1 ml ampoule
			Oral liquid: 10 mg (morphine hydrochloride or morphine sulfate)/5 ml.
			Tablet (slow release): 10 mg–200mg (morphine hydrochloride or morphine sulfate).
			Tablet (immediate release): 10mg (morphine sulfate).

2.3.Medicines for other common symptoms in palliative care			
	20	amitriptyline	Tab. Amitriptyline Hcl 10mg,25mg
	21	cyclizine	Injection: 50 mg/ ml.
			Tablet: 50 mg.
	22	dexamethasone	Injection: 4 mg/ ml in 1- ml ampoule (as disodium phosphate salt).
			Oral liquid: 2 mg/5ml.
			Tablet: 2 mg; 4 mg.
	23	diazepam	Injection: 5 mg/ ml.
			Oral liquid: 2 mg/5ml
			Rectal solution: 2.5 mg; 5 mg; 10 mg.
			Tablet: 5 mg; 10 mg.
	24	docusate sodium	Capsule: 100 mg.

			Oral liquid: 50 mg/5 ml.
	25	fluoxetine	Solid oral dosage form: 20 mg (as hydrochloride). a>8 years.
	26	haloperidol	Injection: 5 mg in 1- ml ampoule.
			Oral liquid: 2 mg/ ml.
			Solid oral dosage form: 0.5 mg; 2mg; 5 mg.
	27	hyoscine butylbromide	Injection: 20 mg/ ml.
			Tablet 10mg
	28	hyoscine hydrobromide	Injection: 400 micrograms/ ml; 600 micrograms/ ml.
			Transdermal patches: 1 mg/72 hours.
			Tablets: 10 mg
	29	lactulose	Oral liquid: 3.1–3.7 g/5 ml.
	30	loperamide	Solid oral dosage form: 2 mg.
	31	metoclopramide	Injection: 5 mg (hydrochloride)/ml in 2ml ampoule.
			Oral liquid: 5 mg/5 ml.
			Solid oral form: 10 mg (hydrochloride).
		midazolam	Injection: 1 mg/ ml; 5 mg/ ml.
			Solid oral dosage form: 7.5 mg; 15 mg.
			Oral liquid: 2mg/ ml.
	32	ondansetron	Injection: 2 mg base/ ml in 2- ml ampoule (as hydrochloride).
			Oral liquid: 4 mg base/5 ml.
			Solid oral dosage form: Eq 4 mg base; Eq 8 mg base. a >1 month.
	33	bisacodyl	Tablets 5mg
3.Anti allergics & Medicines Used in Anaphylaxis			
	34	chlorpheniramine	Tablets:4 mg(Hydrogen maleate)
			Injection: 10 mg/ml (hydrogen maleate in 1ml ampoule)
		dexamethasone	Injection: 4 mg/ ml in 1- ml ampoule (as disodium phosphate salt).
	35	epinephrine (adrenaline)	Injection: 1 mg (as hydrochloride or hydrogen tartrate) in 1- ml ampoule.

	36	hydrocortisone	Powder for injection: 100mg, 250 mg/1 g (as sodium succinate) in vial.
	37	loratadine	Oral liquid: 1 mg/ ml.
			Tablet: 10 mg.
	38	promethazine	Elixir 25mg/5ml,120 ml bottle
	39	prednisolone	Oral liquid: 5 mg/ ml.
			Tablet: 5 mg; 25 mg.
4.Antidotes and other substances used in poisoning			
4.1. Non-specific			
	40	charcoal, activated	Powder.
4.2 Specific			
	41	acetylcysteine	Injection: 200 mg/ ml in 10- ml ampoule.
			Oral liquid: 10%; 20%.
		atropine	Injection: 1 mg (sulfate) in 1- ml ampoule.
	42	calcium gluconate	Injection: 100 mg/ ml in 10- ml ampoule.
	43	methylthioninium chloride (methylene blue)	Injection: 10 mg/ ml in 10- ml ampoule.
	44	naloxone	Injection: 400 micrograms (hydrochloride) in 1- ml ampoule.
	45	penicillamine	Solid oral dosage form: 250 mg.
	46	potassium ferric hexacyano-ferrate(II) -2H2O(Prussian blue)	Powder for oral administration.
	47	sodium nitrite	Injection: 30 mg/ ml in 10- ml ampoule.
	48	sodium thiosulfate	Injection: 250 mg/ ml in 50- ml ampoule.
	49	deferoxamine	Powder for injection: 500 mg (mesilate) in vial.
	50	dimercaprol	Injection in oil: 50 mg/ ml in 2- ml ampoule.
	51	fomepizole	Injection: 5 mg/ ml (sulfate) in 20- ml ampoule or 1 g/ ml (base) in 1.5- ml ampoule.
	52	sodium calcium edetate	Injection: 200 mg/ ml in 5- ml ampoule.
	53	succimer	Solid oral dosage form: 100 mg.
5.Anticonvulsants/Antiepileptics			
	54	carbamazepine	Oral liquid: 100 mg/5 ml.
			Tablet (chewable): 100 mg; 200 mg.

			Tablet (scored): 100 mg; 200 mg.
		diazepam	Gel or rectal solution: 5 mg/ ml in 0.5 ml; 2- ml; 4ml tubes.
	55	bromazepam	Tablets 3mg
	56	magnesium sulfate	Injection: 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).
		midazolam	Solution for oromucosal administration: 5 mg/ml; 10 mg/ml
			Ampoule: 1 mg/ ml; 10 mg/ml
	57	phenobarbital	Injection: 200 mg/ ml (sodium).(ST)
			Oral liquid: 15 mg/5 ml. (P,S,T)
			Tablet: 15 mg to 100 mg. (P,S,T)
	58	phenytoin	Injection: 50 mg/ ml in 5- ml vial (sodium salt).
			Oral liquid: 25 mg to 30 mg/5 ml.
			Solid oral dosage form: 25 mg; 50 mg; 100 mg (sodium salt).
			Tablet (chewable): 50 mg.
	59	valproic acid (sodium valproate)	Oral liquid: 200 mg/5 ml.
			Tablet(enteric coated) 200mg,500mg as sodium Valproate
			Injection: 100 mg/ ml in 4- ml ampoule; 100 mg/ ml in 10- ml ampoule.
	60	ethosuximide	Capsule: 250 mg.
			*Oral liquid: 250 mg/5 ml
6.Antiinfective Medicines			
6.1 Anthelminthics			
6.1.1 Intestinal anthelminthics	61	albendazole	Tablet (chewable): 400 mg.
			Oral liquid: 100 mg / 5ml
	62	levamisole	Tablet: 50 mg; 150 mg (as hydrochloride).
	63	mebendazole	Tablet (chewable): 100 mg; 500 mg.
	64	niclosamide	Tablet (chewable): 500 mg.
	65	pyrantel	Oral liquid: 50 mg (as embonate or pamoate)/ ml.
			Tablet (chewable): 250 mg (as embonate or pamoate).
6.1.2 Antifilarials	66	diethylcarbamazine	Tablet: 50 mg; 100 mg (dihydrogen citrate).

6.1.3 Antischistosomals and other antitrematode medicines	67	praziquantel	Tablet: 150mg ,600 mg.
6.2 Antibacterials			
	68	amoxicillin	Powder for oral liquid: 125 mg (as trihydrate)/5 ml; 250 mg (as trihydrate)/5 ml.
			injection 250mg,500mg
			Solid oral dosage form: 250 mg; 500 mg (as trihydrate).
6.2.1 Beta-lactam medicines	69	amoxicillin + clavulanic acid	Oral liquid: 125 mg amoxicillin + 31.25 mg clavulanic acid/5 ml AND 250 mg amoxicillin + 62.5 mg clavulanic acid/5 ml.
			Tablet: 500 mg (as trihydrate) + 125 mg (as potassium salt).
	70	ampicillin	Powder for injection: 500 mg; 1 g (as sodium salt) in vial.
			Capsules 250mg,500mg
			syrups 125 & 250mg /ml
	71	benzathine benzylpenicillin	Powder for injection: 900 mg benzylpenicillin (= 1.2 million IU) in 5- ml vial; 1.44 g benzylpenicillin (= 2.4 million IU) in 5- ml vial.
	72	benzylpenicillin	Powder for injection: 600 mg (= 1 million IU); 3 g (= 5 million IU) (sodium or potassium salt) in vial.
	73	cefradine	Capsules 250mg,500mg
			injection 250mg ,500mg &1g
			syrup 125mg/5ml,250mg/5ml
	74	cefalexin	Powder for reconstitution with water: 125 mg/5 ml; 250 mg/5 ml (anhydrous).
			Solid oral dosage form: 250 mg (as monohydrate).
	75	cefazolin	Powder for injection: 1 g (as sodium salt) in vial.
	76	cefixime	Capsule: 400 mg (as trihydrate).
			Suspension 100mg/5ml,200mg/5ml
	77	ceftriaxone a	Powder for injection: 250 mg; 500mg, 1 g (as sodium salt) in vial. a >41 weeks corrected gestational age.
	78	cefuroxime Sodium	Inj. Cefuroxime 250mg Vial
	79	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)/5ml.
	80	phenoxymethylpenicillin	Powder for oral liquid: 250 mg (as potassium salt)/5 ml.
			Tablet: 250 mg (as potassium salt).
	81	procaine benzylpenicillin	Powder for injection: 1 g (=1 million IU); 3 g (=3 million IU) in vial.
	82	cefotaxime	Powder for injection: 250 mg /1g per vial (as sodium salt).
	83	ceftazidime	Powder for injection: 250 mg/500mg/ 1 g (as pentahydrate) in vial.
	84	meropenem	Inj. Meropenem 500mg Vial
	85	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.
	86	azithromycin	Capsule: 250 mg; 500 mg (anhydrous).
			Oral liquid: 200 mg/5ml.
6.2.2 Other antibacterials			Oral liquid: 200 mg/5ml
	87	ciprofloxacin	Oral liquid: 250 mg/5 ml (anhydrous) ,
			Solution for IV infusion: 2 mg/ ml (as hyclate)
			Tablet coated, 250mg /500mg (as hydrochloride) Strip/blister.
	88	clarithromycin	Oral liquid: 125 mg / 5ml
			Solid oral dosage form: 500 mg.
	89	doxycycline	Oral liquid: 25 mg/5 ml; 50 mg/5ml (anhydrous).
			Solid oral dosage form: 50 mg; 100 mg (as hyclate) Use in children <8 years only for life-threatening infections when no alternative exists.
	90	gentamicin	Injection: 10 mg; 40 mg (as sulfate)/ ml in 2- ml vial.
	91	metronidazole	Injection: 500 mg in 100- ml vial.
			Oral liquid: 200 mg (as benzoate)/5ml.
			Tablet: 400mg.
	92	nitrofurantoin	Oral liquid: 25 mg/5 ml. Tablet: 100 mg.
	93	sulfamethoxazole + trimethoprim	Injection:80 mg + 16 mg/ ml in 5- ml ampoule; 80mg + 16 mg/ ml in 10- ml ampoule.
			oral liquid:200mg+40mg/5ml
			Tablet: 100 mg + 20 mg; 400 mg + 80 mg; 800mg + 160 mg.

	94	trimethoprim	Oral liquid: 50 mg/5 ml Tablet: 100 mg; 200 mg. a>6 months.
			Oral liquid: 200 mg + 40 mg/5 ml.
	95	clindamycin	Capsule: 150 mg/300mg (as hydrochloride).
			Injection: 150 mg (as phosphate)/ ml.
			Oral liquid: 75 mg/5ml (as palmitate)
	96	vancomycin	Powder for injection: 250 mg/500mg (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. Color-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.		
	97	clofazimine	Capsule: 50 mg; 100 mg.
	98	dapsone	Tablet: 25 mg; 50 mg; 100 mg.
	99	rifampicin	Solid oral dosage form: 150 mg; 300 mg.
6.2.4 Antituberculosis medicines	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		
	100	ethambutol	Oral liquid: 25 mg/ ml.
			Tablet: 100 mg to 400 mg hydrochloride).
	101	ethambutol + isoniazid	Tablet: 400 mg + 150 mg.
	102	ethambutol + isoniazid + pyrazinamide + rifampicin	Tablet: 275 mg + 75 mg + 400 mg + 150 mg.
	103	ethambutol + isoniazid + rifampicin	Tablet: 275 mg + 75 mg + 150 mg.
	104	isoniazid	Oral liquid: 50 mg/5 ml,
			Tablet: 100 mg to 300 mg.
			Tablet (scored): 50 mg.
	105	isoniazid + pyrazinamide + rifampicin	Tablet:75 mg + 400 mg + 150 mg. 150 mg + 500 mg + 150 mg (For intermittent use three times weekly).
	106	isoniazid + rifampicin	Tablet:75 mg + 150 mg; 150 mg + 300 mg.
			60 mg + 60 mg (For intermittent use three times weekly)
			150 mg + 150 mg (For intermittent use three times weekly).
	107	pyrazinamide	Oral liquid: 30 mg/ ml.
			Tablet: 400 mg.
			Tablet (dispersible): 15 g.
			Tablet (scored): 150 mg.
	108	rifabutin	Capsule: 150 mg
		rifampicin	Oral liquid: 20 mg/ ml.

			Solid oral dosage form:150 mg; 300 mg.
	109	rifapentine	Tablet: 150 mg
	110	streptomycin	Powder for injection: 1 g (as sulfate) in vial.
	111	amikacin	Powder for injection: 100 mg; 500 mg; 1 g (as sulfate) in vial.
	112	bedaquiline	Tablet: 100 mg
	113	capreomycin	Powder for injection: 1 g (as sulfate) in vial.
	114	cycloserine	Solid oral dosage form: 250 mg.
	115	delamanid	Tablet: 50 mg
	116	ethionamide	Tablet: 125 mg; 250 mg.
	117	kanamycin	Powder for injection: 1 g (as sulfate) in vial.
	118	levofloxacin	Tablet: 250mg/500 mg/750 mg.
	119	linezolid	Injection for intravenous administration: 2 mg/ ml in 300 ml bag
			Powder for oral liquid: 100 mg/5 ml
			Tablet: 400 mg; 600 mg
	120	p-aminosalicylic acid	Granules: 4g in sachet.
			Tablet: 500 mg.
6.3 Antifungal medicines			
6.3 Antifungal medicines	121	amphotericin B	Powder for injection: 50 mg in vial (as sodium deoxycholate or liposomal complex).
	122	clotrimazole	Vaginal cream: 1%; 10%.
			Vaginal tablet: 100 mg; 500 mg. with applicator
	123	fluconazole	Capsule: 50 mg,150mg,200mg
			Injection: 2 mg/ ml in vial.
			Oral liquid: 50 mg/5 ml.
	124	flucytosine	Capsule: 250 mg.
			Infusion: 2.5 g in 250 ml.
	125	griseofulvin	Oral liquid: 125 mg/5 ml
			Solid oral dosage form: 125 mg; 250 mg.
	126	nystatin	Lozenge: 100 000 IU.
			Oral liquid: 50 mg/5 ml; 100 000 IU/ ml
			Pessary: 100 000 IU
			Tablet: 100 000 IU; 500 000 IU.
	127	potassium iodide	Saturated solution.
6.4 Antiviral medicines			
	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. 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.		
6.4.1 Antiherpes medicines	128	aciclovir	Oral liquid: 200 mg/5 ml
			Powder for injection: 250 vial. as sodium salt) in vial
			Tablet: 200 mg.
6.4.2.1-Nucleoside/nucleotide reverse transcriptase inhibitors	129	abacavir (ABC)	oral liquid 100mg as sulfate /5ml
	130	lamivudine(3TC)	Oral liquid 50mg/5ml
			Tablet 150mg
	131	stavudine(d4T)	capsules 15,20,30mg
			Powder for oral liquid 5mg/5ml
	132	tenofovir disoproxil fumarate (TDF)	tablets 300mg(tenofovir disoproxil fumarate – equivalent to 245 mg tenofovir disoproxil).
	133	zidovudine (ZDV or AZT)	Capsule: 100 mg;
			Oral liquid: 50 mg/5 ml
			Tablet: 300 mg.
6.4.2.2 Non-nucleoside reverse transcriptase inhibitors	134	efavirenz (EFV or EFZ) (a)	Tablet: 200 mg (scored); 600 mg. a >3 years or >10 kg weight.
	135	nevirapine (NVP)	Oral liquid: 50 mg/5 ml.
			Tablet: 50 mg (dispersible); 200 mg.
6.4.2.3 Protease inhibitors	136	atazanavir a	Solid oral dosage form: 100 mg; 150 mg; 300 mg (as sulfate). a >25 kg.
	137	darunavir	Tablet: 75 mg; 400 mg; 600 mg; 800 mg a >3 years
	138	lopinavir + ritonavir (LPV/r)	Oral liquid: 400 mg + 100 mg/5 ml.
			Tablet (heat stable): 100 mg + 25 mg;200 mg + 50 mg.
	139	ritonavir	Oral liquid: 400 mg/5 ml. 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).
			Tablet (heat stable): 25 mg; 100 mg
	140	saquinavir (SQV)	Solid oral dosage form: 200 mg; 500 mg (as mesilate). a >25 kg.
	141	abacavir + lamivudine	Tablet (dispersible, scored): 60 mg (as sulfate) + 30mg

	142	efavirenz + emtricitabine + tenofovir	Tablet: 600 mg + 200 mg + 300 mg (disoproxil fumarate equivalent to 245 mg tenofovir disoproxil).
	143	emtricitabine + tenofovir	Tablet: 200 mg + 300 mg (disoproxil fumarate equivalent to 245 mg tenofovir disoproxil).
	144	lamivudine + nevirapine + stavudine	Tablet: 150 mg + 200 mg + 30 mg.
			Tablet (dispersible): 30 mg + 50 mg + 6 mg.
	145	lamivudine + nevirapine + zidovudine	Tablet: 30 mg + 50 mg + 60 mg [c]; 150 mg + 200 mg + 300 mg.
	146	lamivudine + zidovudine	Tablet: 30 mg + 60 mg; 150 mg + 300 mg.
6.4.3 Other antivirals	147	oseltamivir	Capsule: 30 mg; 45 mg; 75 mg (as phosphate)..
			Oral powder: 12 mg/ ml.
	148	ribavirin	Injection for intravenous administration: 800 mg and 1 g in 10- ml phosphate buffer solution.
			solid oral dosage form: 200 mg; 400 mg; 600 mg.
	149	valganciclovir	Tablet: 450 mg.
6.4.4 Antihepatitis medicines			
6.4.4.1 Medicines for hepatitis B			
6.4.4.1.1 Nucleoside/Nucleotide reverse transcriptase inhibitors	150	entecavir	Oral liquid: 0.05 mg/ ml
			Tablet: 0.5 mg; 1 mg
		tenofovir disoproxil fumarate (TDF)	Tablet: 300 mg (tenofovir disoproxil fumarate – equivalent to 245 mg tenofovir disoproxil).
6.4.4.2 Medicines for hepatitis C	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 utilizing medicines from different classes.		
6.4.4.2.1 Nucleotide polymerase inhibitors	151	sofosbuvir	Tablet: 400 mg
6.4.4.2.2 Protease inhibitors	152	simeprevir	Capsule 150 mg
6.4.4.2.3 NS5A inhibitors	153	daclatasvir	Tablet: 30 mg (as hydrochloride)
6.4.4.2.4 Non-nucleoside polymerase inhibitors	154	dasabuvir	Tablet: 250 mg
6.4.4.2.5 Other antivirals		ribavirin	Injection for intravenous administration: 800 mg and 1 g in 10- ml phosphate buffer solution.
			Solid oral dosage form: 200 mg; 400 mg; 600 mg.

	155	pegylated interferon alfa (2a or 2b)	Vial or prefilled syringe: 180 micrograms (peginterferon alfa-2a), 80 microgram, 100 microgram (peginterferon alfa-2b).
		lamivudine	Tablets: 150 mg
	156	ledipasvir + sofosbuvir	Tablet: 90 mg + 400 mg.
	157	ombitasvir + paritaprevir + ritonavir	Tablet: 12.5 mg + 75 mg + 50 mg
6.5 Antiprotozoal medicines			
6.5.1 Antiamoebic and antigiardiasis medicines	158	diloxanide Furoate (a)	Tablet: 500 mg (furoate). a >25 kg.
		metronidazole	Injection: 500 mg in 100- ml vial.
			Oral liquid: 200 mg (as benzoate)/5 ml.
			Tablet: 400mg.
6.5.2 Antileishmaniasis medicines		amphotericin B	Powder for injection: 50 mg in vial (as sodium deoxycholate or liposomal complex).
	159	miltefosine	Solid oral dosage form: 10 mg; 50 mg.
	160	paromomycin	Solution for intramuscular injection: 750 mg of paromomycin base (as the sulfate).
	161	meglumine antimoniate	Injection 30%, equivalent to approximately 8.1% antimony (pentavalent) in 5- ml ampoule.
	162	sodium stibogluconate	Injection: 100 mg/ ml, 1 vial = 30 ml
6.5.3 Antimalarial medicines	Medicines for the treatment of *P. falciparum* 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.		
	163	amodiaquine	Tablet: 153 mg or 200 mg (as hydrochloride).
	164	artemether	Oily injection: 80 mg/ ml in 1- ml ampoule.
	165	artemether + lumefantrine	Tablet: 20 mg + 120 mg.Tablet (dispersible): 20 mg + 120 mg.
	166	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.
			Rectal dosage form: 50 mg; 200 mg capsules (for pre-referral treatment of severe malaria only; patients should be taken to an appropriate health facility for follow-up care).
			Tablet: 50 mg.
	167	artesunate + amodiaquine	Tablet: 25 mg + 67.5 mg; 50 mg + 135 mg; 100mg + 270 mg.
	168	artesunate + mefloquine	Tablet: 25 mg + 55 mg; 100 mg + 220 mg.
	169	chloroquine	Oral liquid: 50 mg (as phosphate or sulfate)/5 ml.

			Tablet: 100 mg; 150 mg (as phosphate or sulfate).
		doxycycline(D)	Capsule: 100 mg (as hydrochloride or hyclate).
			Tablet (dispersible): 100 mg (as monohydrate).
	170	mefloquine	Tablet: 250 mg (as hydrochloride).
	171	primaquine	Tablet: 7.5 mg; 15 mg (as diphosphate).
	172	quinine	Injection: 300 mg quinine hydrochloride/ ml in 2ml ampoule.
			Tablet: 300 mg (quinine sulfate) or 300 mg (quinine bisulfate).
	173	artesunatePlus Sulphadoxine and Pyrimethamine	Coblister of (6+2) tablets. 2 Large tablets,Each Large tablets contains Sulfadoxine 500mg U.S.P. + Pyrimethamine 25mg U.S.P & 6 Small tablets,Each tablet contains Artesunate 50mg U.S.P
			Coblister of (6+3) tablets. 3 Large tablets Each contains Sulfadoxine 500mg U.S.P.+ Pyrimethamine 25mg U.S.P. 6 Small tablets,Each tablet contains Artesunate 100mg U.S.P.
6.5.3.2 For prophylaxis		chloroquine	Oral liquid: 50 mg (as phosphate or sulfate)/5 ml.
			Tablet: 150 mg (as phosphate or sulfate).
		doxycycline (a)	Solid oral dosage form: 100 mg (as hydrochloride or hyclate). a >8 years.
		mefloquine	Tablet: 250 mg (as hydrochloride). a >5 kg or >3 months.
	174	proguanil	Tablet: 100 mg (as hydrochloride).
6.5.4 Antipneumocystosis and antitoxoplasmosis medicines	175	pyrimethamine	Tablet: 25 mg.
	176	sulfadiazine	Tablet: 500 mg.
		sulfamethoxazole + trimethoprim	Injection: 80 mg + 16 mg/ ml in 5- ml ampoule; 80 mg + 16 mg/ ml in 10- ml ampoule.
			Oral liquid: 200 mg + 40 mg/5 ml.
			Tablet: 100 mg + 20 mg; 400 mg + 80 mg
	177	pentamidine (D)	Tablet: 200 mg; 300 mg (as isethionate).
			Powder for Injection 200mg
7. Antimigraine Medicines			
7.1 For treatment of acute attack			
		acetylsalicylic acid	Tablet: 300 mg to 500 mg.
		ibuprofen	Tablet: 200 mg; 400 mg.
		paracetamol	Oral liquid: 125 mg/5 ml.

			Tablet: 300 mg to 500 mg.
7.2 For prophylaxis			
	178	propranolol	Tablet: 20 mg; 40 mg (hydrochloride).
8. Anti neoplastic &immunosuppressants			
Medicines listed below should be used according to protocols for treatment of the diseases			
8.1 Immunosuppressive medicines			
	179	azathioprine	Powder for injection: 100 mg (as sodium salt) in vial.
			Tablet (scored): 50 mg.
	180	ciclosporin	Capsule: 25 mg. Concentrate for injection: 50mg/ ml in 1- ml ampoule for organ transplantation.
8.2 Cytotoxic and adjuvant medicines			
	181	all-trans retinoid acid (ATRA)	Capsule: 10 mg. acute promyelocytic leukemia.
	182	allopurinol	Tablet: 100 mg; 300 mg.
	183	asparaginase	Powder for injection: 10 000 IU in vial. • acute lymphoblastic leukemia.
	184	bendamustine	Injection: 45 mg/0.5 ml; 180 mg/2 ml. Indications • chronic lymphocytic leukemia • follicular lymphoma
	185	bleomycin	Powder for injection: 15 mg (as sulfate) in vial. • Hodgkin lymphoma • Kaposi sarcoma • ovarian germ cell tumour • testicular germ cell tumour
	186	calcium folinate	Injection: 3 mg/ ml in 10- ml ampoule. Tablet: 15 mg. • early stage Colon cancer • early stage rectal cancer • early stage breast cancer • gestational trophoblastic neoplasia • metastatic colorectal cancer • osteosarcoma • Burkitt lymphoma

	187	capecitabine	Tablet: 150 mg; 500 mg. - Indications • early stage colon cancer • early stage rectal cancer • metastatic breast cancer • metastatic colorectal cancer
	188	carboplatin	Injection: 50 mg/5 ml; 150 mg/15 ml; 450mg/45 ml; 600 mg/60 ml. • early stage breast cancer • epithelial ovarian cancer , • nasopharyngeal cancer, non-small cell lung cancer , • osteosarcoma , • retinoblastoma
	189	chlorambucil	Tablet: 2 mg. • chronic lymphocytic leukemia.
	190	cisplatin	Injection: 50 mg/50 ml; 100 mg/100 ml. - Indications cervical cancer (as a radiosensitizer) • head and neck cancer (as a radiosensitizer) • nasopharyngeal cancer (as a radio-sensitizer) • non-small cell lung cancer • osteosarcoma • ovarian germ cell tumour • testicular germ cell tumour • Burkitt lymphoma
	191	cyclophosphamide	Powder for injection: 500 mg in vial. Tablet: 25 mg. • chronic lymphocytic leukemia , • diffuse large B-cell, lymphoma ,- • early stage breast cancer • gestational trophoblastic neoplasia , • Hodgkin lymphoma, • follicular lymphoma, • domyosarcoma • Ewing sarcoma • acute lymphoblastic leukemia, • metastatic breast cancer.
	192	cytarabine	Powder for injection: 100 mg in vial. • acute myelogenous leukemia • acute lymphoblastic leukemia , • acute promyelocytic leukemia • Burkitt lymphoma.

	193	dacarbazine	Powder for injection: 100 mg in vial. • Hodgkin lymphoma
	194	dactinomycin	Powder for injection: 500 micrograms in vial. • gestational trophoblastic neoplasia • rhabdomyosarcoma, • Wilms tumour
	195	daunorubicin	Powder for injection: 50 mg (hydrochloride) in vial. • acute myelogenous leukemia • acute promyelocytic leukemia
	196	docetaxel	Injection: 20 mg/ ml; 40 mg/ ml. • early stage breast cancer , • metastatic breast cancer , • metastatic prostatecancer
	197	doxorubicin	Powder for injection: 10 mg; 50 mg (hydrochloride) in vial. • diffuse large B-cell lymphoma • early stage breast.cancer • Hodgkin lymphoma, • Kaposi sarcoma,follicular lymphoma, • etastatic breast cancer osteosarcoma , • Ewing sarcoma, • acute lymphoblastic leukemia,
			• Wilms tumour • Burkitt lymphoma
	198	etoposide	Capsule: 100 mg. Injection: 20 mg/ ml in 5- ml ampoule, • testicular germ cell tumour, • gestational trophoblastic neoplasia, • Hodgkin lymphoma, • non-small cell lung cancer, • ovarian germ cell tumour • retinoblastoma • Ewing sarcoma, • acute lymphoblastic leukemia, • Burkitt lymphoma
	199	fludarabine	Powder for injection: 50 mg (phosphate) in vial. Tablet: 10 mg , chronic lymphocytic leukemia.
	200	fluorouracil (D)	injection: 50 mg/ ml in 5- ml ampoule. • early stage breast cancer • early stage colon cancer • early stage rectal cancer • metastatic colorectal cancer
			• nasopharyngeal cancer.

	201	filgrastim	Injection: 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. • As primary prophylaxis in patients at high risk for developing febrile neutropenia associated with myelotoxic chemotherapy. • As secondary prophylaxis for patients who have experienced neutropenia following prior myelotoxic chemotherapy. • To facilitate administration of dose dense chemotherapy regimens
	202	gemcitabine	Powder for injection: 200 mg in vial, 1 g in vial. - Indications • epithelial ovarian cancer • non-small cell lung cancer
	203	hydroxycarbamide	Solid oral dosage form: 200 mg; 250 mg; 300 mg; 400 mg; 500 mg; 1 g. chronic myeloid leukemia.
	204	ifosfamide	Powder for injection: 500 mg vial; 1-g vial; 2-g vial. • ovarian germ cell tumour , • osteosarcoma , • rhabdomyosarcoma • Ewing sarcoma
	205	imatinib	Tablet: 100 mg; Indications • chronic myeloid leukemia • gastrointestinal stromal tumour Tablet: 400 mg.
	206	irinotecan	Injection: 40 mg/2 ml in 2- ml vial; 100 mg/5 ml in 5- ml vial; 500 mg/25 ml in 25- ml vial.
	207	mercaptopurine	Tablet: 50 mg. - acute lymphoblastic leukemia ,- acute promyelocytic leukemia.
	208	mesna	Injection: 100 mg/ ml in 4- ml and 10- ml ampoules. Tablet: 400 mg; 600 mg. - testicular germ cell tumour ,- ovarian germ cell tumour ,- osteosarcoma ,- rhabdomyosarcoma ,- Ewing sarcoma.
	209	methotrexate	Powder for injection: 50 mg (as sodium salt) in vial. Tablet: 2.5 mg (as sodium salt). - early stage breast cancer - gestational trophoblastic neoplasia ,- osteosarcoma ,- acute lymphoblastic leukemia,- acute promyelocytic leukemia

	210	oxaliplatin	Injection: 50 mg/10 ml in 10- ml vial; 100 mg/20 ml in 20- ml vial; 200 mg/40 ml in 40- ml vial. Indications • early stage colon cancer • metastatic colorectal cancer
	211	paclitaxel	Powder for injection: 6 mg/ ml.-
			• epithelial ovarian cancer • early stage breast cancer. • metastatic breast cancer • Kaposi sarcoma • nasopharyngeal cancer • non-small cell lung cancer • ovarian germ cell tumour
	212	procarbazine	Capsule: 50 mg (as hydrochloride).
	213	rituximab	Injection: 100 mg/10 ml in 10- ml vial; 500 mg/50 ml in 50- ml vial. Indications • diffuse large B-cell lymphoma • chronic lymphocytic leukemia • Follicular lymphoma.
	214	thioguanine	Solid oral dosage form: 40 mg. • acute lymphoblastic leukemia.
	215	trastuzumab	Dose form:Indications, • early stage HER2 positive breast cancer • metastatic HER2 positive breast cancer.
	216	vinblastine	Powder for injection: 10 mg (sulfate) in vial. • Hodgkin lymphoma, • Kaposi sarcoma. • Testicular germ cell tumour , • Ovarian germ cell tumour
	217	vincristine	Powder for injection: 1 mg; 5 mg (sulfate) in vial. • diffuse large B-cell lymphoma , gestational trophoblastic neoplasia , • Hodgkin lymphoma • Kaposi sarcoma • follicular lymphoma • retinoblastoma • rhabdomyosarcoma, • Ewing sarcoma • acute lymphoblastic leukemia • Wilms tumour • Burkitt lymphoma.
	218	vinorelbine	Injection: 10 mg/ml in 1- ml vial; 50 mg/5 ml in 5- ml vial. Indications • non-small cell lung cancer
8.3 Hormones and antihormones			
	219	anastrozole	Tablet: 1 mg. Indications

			• early stage breast cancer • metastatic breast cancer
	220	bicalutamide	Tablet: 50 mg Indications • metastatic prostate cancer
		dexamethasone	Injection: 4 mg/ ml in 1- ml ampoule (as disodium phosphate salt).Oral liquid: 2 mg/5 ml. • acute lymphoblastic leukemia.
	221	leuprorelin	Dose form - early stage breast cancer , • metastatic prostate cancer
		hydrocortisone	Powder for injection: 100 mg (as sodium succinate) in vial. • acute lymphoblastic leukemia.
	222	methylprednisolone	Injection: 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. • acute lymphoblastic leukamia.
		prednisolone	Oral liquid: 5 mg/ ml [c]. Tablet: 5 mg; 25 mg. • chronic lymphocytic leukemia • diffuse large B-cell lymphoma • Hodgkin lymphoma • follicular lymphoma • acute lymphoblastic leukemia • Burkitt lymphoma
	223	tamoxifen	Tablet: 10 mg; 20 mg (as citrate). • early stage breast cancer • metastatic breast cancer
9.AntiParkinsonism Medicines			
	224	biperiden	Injection: 5 mg (lactate) in 1- ml ampoule.
			Tablet: 2 mg (hydrochloride).
	225	levodopa + o carbidopa	Tablet: 100 mg + 10 mg; 100 mg + 25 mg; 250 mg + 25 mg
10.Medicines affecting the blood			
10.1 Antianaemia medicines			
	226	ferrous salt	Oral liquid: equivalent to 25 mg iron (as sulfate)/ml.
			Tablet: equivalent to 60 mg iron.
	227	ferrous salt + folic acid	Tablet: equivalent to 60 mg iron + 400 micrograms folic acid (nutritional supplement for use during pregnancy).
	228	folic acid	Tablet: 400 micrograms; 1 mg; 5 mg.

	229	hydroxocobalamin	Injection: 1 mg (as acetate, as hydrochloride or as sulfate) in 1- ml ampoule.
10.2 Medicines affecting coagulation			
	230	enoxaparin	Injection: ampoule or pre-filled syringe 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 .
	231	clopidogrel	Tablet 75mg
	232	heparin sodium	Injection: 1000 IU/ ml; 5000 IU/ ml; 20 000 IU/ ml in 1- ml ampoule.
	233	phytomenadione	Injection: 1 mg/ ml ampoule; 10 mg/ ml in 5- ml,
			Tablet: 10 mg.
	234	protamine sulfate	Injection: 10 mg/ ml in 5- ml ampoule.
	235	tranexamic acid	Injection: 100 mg/ ml in 10- ml ampoule.
			capsules: 250, 500mg
	236	warfarin	Tablet: 1 mg; 2 mg; 5 mg (sodium salt).
	237	desmopressin	Injection: 4 micrograms/ ml (as acetate) in 1- ml ampoule.
			Nasal spray: 10 micrograms (as acetate) per dose
10.3 Other medicines for haemoglobinopathies			
		deferoxamine	Powder for injection: 500 mg (mesilate) in vial.
		hydroxycarbamide	Solid oral dosage form: 200 mg; 500 mg; 1 g.
11.Blood Products of human origin & Plasma substitutes			
11.1 Blood and blood components			
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 onvoluntary, 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.			
	238	fresh–frozen plasma	
	239	platelets	
	240	red blood cells	
	241	whole blood	
11.2 Plasma-derived medicines			
All human plasma -derived medicines should comply with WHO requirements			
11.2.1 Human immunoglobulins	242	anti-D immunoglobulin	Injection: 250 micrograms in single-dose vial.

	243	anti-rabies immunoglobulin	Injection: 150 IU/ ml in vial.
	244	anti-tetanus immunoglobulin	Injection: 500 IU in vial
	245	normal immunoglobulin*	Intramuscular administration: 16% protein solution.
			* Intravenous administration: 5%; 10% protein solution.
			** Subcutaneous administration: 15%; 16% protein solution. **Indicated for primary immune deficiency and Kawasaki disease.
11.2.2 Blood coagulation factors	246	coagulation factor VIII	Powder for injection: 500 IU/vial.
	247	coagulation factor IX	Powder for injection: 500 IU/vial, 1000 IU/vial.
11.3 Plasma substitutes			
	248	dextran 70	Injectable solution: 6%.
12.Cardiovascular medicines			
12.1 Antianginal medicines			
	249	atenolol	Tablet: 50mg & 100mg
	250	glyceryl trinitrate	Tablet (sublingual): 500 micrograms.
	251	isosorbide dinitrate	Tablet (sublingual): 5 mg.
	252	verapamil	Tablet: 40 mg; 80 mg (hydrochloride).
12.2 Antiarrhythmic medicines			
		bisoprolol	Tablet: 1.25 mg; 5 mg.
	253	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).
	254	amiodarone	Injection: 50 mg/ ml in 3- ml ampoule (hydrochloride).
			Tablet: 100 mg; 200 mg; 400 mg (hydrochloride
12.3 Antihypertensive medicines			
	255	amlodipine	Tablet: 5 mg (as maleate, mesylate or besylate).
		bisoprolol	Tablet: 1.25 mg; 5 mg.

		propranolol	Tablets 10 mg; 40 mg; 80 mg
	256	enalapril	Tablet: 2.5 mg; 5 mg (as hydrogen maleate).
	257	hydralazine	Powder for injection: 20 mg (hydrochloride) in ampoule.
			Tablet: 25 mg; 50 mg (hydrochloride).
	258	hydrochlorothiazide	Oral liquid: 50 mg/5 ml.
			Solid oral dosage form: 12.5 mg; 25 mg.
			inj 20mg
	259	methyldopa	Tablet: 250 mg.
			injection 250mg
	260	sodium nitroprusside	Powder for infusion: 50 mg in ampoule.
12.4 Medicines used in heart failure			
		bisoprolol	Tablet: 1.25 mg; 5 mg.
		digoxin	Injection: 250 micrograms/ ml in 2- ml ampoule.
			Oral liquid: 50 micrograms/ ml.
			Tablet: 62.5 micrograms; 250 micrograms
		enalapril	Tablet: 2.5 mg; 5 mg (as hydrogen (p,s) maleate).
			Injection(T) : 10 mg/ ml in 2- ml ampoule.
	261	furosemide	Oral liquid: 20 mg/5 ml.
			Tablet: 40 mg.
		hydrochlorothiazide	Oral liquid: 50 mg/5 ml.
			Solid oral dosage form: 25 mg.
	262	spironolactone	Tablet: 25 mg.
	263	dopamine	Injection: 40 mg/ ml (hydrochloride) in 5- ml vial.
	264	dobutamine	250mg injection
12.5 Antithrombotic medicines			
12.5.1 Anti-platelet medicines		acetylsalicylic acid	Tablet: 100 mg.
		clopidogrel	Tablet: 75 mg; 300 mg
12.5.2 Thrombolytic medicines	265	streptokinase	Powder for injection: 1.5 million IU in vial.
12.6 Lipid-lowering agents			
	266	simvastatin	Tablet: 5 mg; 10 mg; 20 mg; 40 mg.

13.Dermatological Medicines(Topical)			
13.1 Antifungal medicines			
	267	miconazole	Cream or ointment: 2% (nitrate).
	268	selenium sulfide	Detergent-based suspension: 2%.
		sodium thiosulfate	Solution: 15%.
	269	terbinafine	Cream: 1% or Ointment: 1% terbinafine hydrochloride.
13.2 Anti-infective medicines			
	270	mupirocin	Cream (as mupirocin calcium) 2%
			Ointment: 2%.
	271	neomycin sulphate +bacitracin zinc	250 IU/gm
	272	potassium permanganate	Aqueous solution: 1:10 000.
	273	silver sulfadiazine (a)	Cream: 1%. a >2 months.
13.3 Anti-inflammatory and antipruritic medicines			
	274	betamethasone (a)	Cream or ointment: 0.1% (as valerate). a Hydrocortisone preferred in neonates.
	275	calamine	Lotion.
		hydrocortisone	Cream or ointment: 1% (acetate).
13.4 Medicines affecting skin differentiation and proliferation			
	276	benzoyl peroxide	Cream or lotion: 5%.
	277	coal tar	Solution: 5%.
		fluorouracil	Ointment: 5%.
	278	podophyllum resin	Solution: 10% to 25%.
	279	salicylic acid	Solution: 5%.
	280	urea	Cream or ointment: 5%; 10%.
13.5 Scabicides and pediculicides			
	281	benzyl benzoate (a)	Lotion: 25%. a >2 years.
	282	permethrin	Cream: 5%.
			Lotion: 1%.
14.Diagnostic Agents			
14.1 Ophthalmic medicines			
	283	fluorescein	Eye drops: 1% (sodium salt).
	284	tropicamide	Eye drops: 0.5%.
14.2 Radiocontrast media			

	285	amidotrizoate	Injection: 140 mg to 420 mg iodine (as sodium or meglumine salt)/ ml in 20- ml ampoule.
	286	barium sulfate	Aqueous suspension.
	287	iohexol	Injection: 140 mg to 350 mg iodine/ ml in 5- ml; 10ml; 20- ml ampoules.
		barium sulfate	Aqueous suspension.
	288	meglumine iotroxate	Solution: 5 g to 8 g iodine in 100 ml to 250 ml.
15.Disinfectants & Antiseptics			
15.1 Antiseptics			
	289	chlorhexidine	Solution 5% digluconate
	290	ethanol	Solution: 70% (denatured).
	291	povidone iodine	Solution: 10% (equivalent to 1% available iodine).
15.2 Disinfectants			
	292	alcohol based hand rub	Solution containing ethanol 80% volume /volume .Solution containing isopropyl alcohol 75% volume/volume
	293	chlorine base compound	Powder: (0.1% available chlorine) for solution.
	294	chloroxylenol	Solution: 4.8%.
	295	glutaral	Solution: 2%.
16.Diuretics			
	296	amiloride	Tablet: 5 mg (hydrochloride).
		furosemide	Injection: 10 mg/ ml in 2- ml ampoule..
			Oral liquid: 20 mg/5 ml
			Tablet: 10 mg; 20 mg; 40 mg.
		hydrochlorothiazide	Solid oral dosage form: 25 mg.
			Injectioin: 20mg
	297	mannitol	Injectable solution: 10%; 20%.
		spironolactone	Oral liquid: 5 mg/5 ml; 10 mg/5 ml; 25 mg/5ml.
			Tablet: 25 mg
17.Gastrointestinal Medicines			
	298	pancreatic enzymes	Age-appropriate formulations and doses including lipase, protease and amylase.
17.1 Antiulcer medicines			
	299	omeprazole	Powder for injection: 40 mg in vial .
			Powder for oral liquid: 20 mg; 40 mg sachets
			Solid oral dosage form: 10 mg; 20 mg; 40 mg.
	300	ranitidine	Injection: 25 mg/ ml (as hydrochloride) in 2- ml ampoule.

			Oral liquid: 75 mg/5 ml (as hydrochloride).
			Tablet: 150 mg (as hydrochloride).
17.2 Antiemetic medicines			
		dexamethasone	Injection: 4 mg/ ml in 1- ml ampoule (as disodium phosphate salt).
			Oral liquid: 0.5 mg/5 ml; 2 mg/5ml
			Solid oral dosage form: 0.5 mg; 0.75 mg; 1.5 mg; 4 mg.
		metoclopramide	Injection: 5 mg (hydrochloride)/ ml in 2- ml ampoule. .
			Oral liquid: 5 mg/5 ml
			Tablet: 10 mg (hydrochloride). a Not in neonates.
		ondansetron (a)	Injection: 2 mg base/ ml in 2- ml ampoule (as hydrochloride).
			Oral liquid: 4 mg base/5ml
			Solid oral dosage form: Eq 4 mg base; Eq 8 mg base; Eq 24 mg base. a >1 . month.

17.3 Anti-inflammatory medicines			
	301	sulfasalazine	Retention enema.Suppository: 500 mg.
			Tablet: 500 mg.
		hydrocortisone	Retention enema. Suppository: 25 mg (acetate). (the o only applies to hydrocortisone retention enema).
17.4 Laxatives			
	302	senna	Tablet: 7.5 mg (sennosides) (or traditional dosage forms).
17.5 Medicines used in diarrhoea			
17.5.1 Oral rehydration	303	oral rehydration salts	Powder for dilution in 200 ml; 500 ml; 1l.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: 245mosm/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
17.5.2 Medicines for diarrhoea	304	zinc sulfate	Solid oral dosage form: 20 mg.
18.Horomones,other endocrine medicines & contraceptives			
18.1 Adrenal hormones and synthetic substitutes			
	305	fludrocortisone	Tablet: 100 micrograms (acetate).
		hydrocortisone	Tablet: 5 mg; 10 mg; 20 mg.

18.2 Androgens			
	306	testosterone	Injection: 200 mg (enanthate) in 1- ml ampoule.
18.3 Contraceptives			
18.3.1 Oral hormonal contraceptives	307	ethinylestradiol + o levonorgestrel	Tablet: 30 micrograms + 150 micrograms.
	308	ethinylestradiol + norethisterone	Tablet: 35 micrograms + 1 mg.
	309	levonorgestrel	Tablet: 30 micrograms; 750 micrograms (pack of two); 1.5 mg.
18.3.2 Injectable hormonal contraceptives	310	estradiol cypionate + medroxyprogesterone acetate	Injection: 5 mg + 25 mg.
	311	medroxyprogesterone acetate	Depot injection: 150 mg/ ml in 1- ml vial.
	312	norethisterone enantate	Oily solution: 200 mg/ ml in 1- ml ampoule.
18.3.3 Intrauterine devices	313	copper-containing device	
	314	levonorgestrel-releasing intrauterine system	Intrauterine system with reservoir containing 52 mg of levonorestrel
18.3.4 Barrier methods	315	condoms	
	316	diaphragms	
18.3.5 Implantable contraceptives	317	etonogestrel-releasing implant	Single-rod etonogestrel-releasing implant, containing 68 mg of etonogestrel.
	318	levonorgestrel-releasing implant	Two-rod levonorgestrel-releasing implant, each rod containing 75 mg of levonorgestrel (150 mg total).
18.3.6 Intravaginal contraceptives	319	progesterone vaginal ring	Progesterone-releasing vaginal ring containing 2.074 g of micronized progesterone.
18.4 Estrogens			
18.5 Insulins and other medicines used for diabetes			
	320	gliclazide	Solid oral dosage form: (controlledrelease tablets) 30 mg; 60 mg; 80 mg
	321	glucagon	Injection: 1 mg/ ml.
	322	insulin injection (soluble)	Injection: 40 IU/ ml in 10- ml vial; 100 IU/ ml in 10- ml vial.
	323	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).
	324	metformin	Tablet: 500 mg (hydrochloride).
18.6 Ovulation inducers			

	325	clomifene	Tablet: 50 mg (citrate).
18.7 Progestogens			
		medroxyprogesterone	Tablet: 5 mg. acetate
18.8 Thyroid hormones and antithyroid medicines			
	326	levothyroxine	Tablet: 25 micrograms; 50 micrograms; 100 micrograms (sodium salt).
			Tablet: 60 mg.
	327	propylthiouracil	Tablet: 50 mg.
	328	lugol′s solution	Oral liquid: about 130 mg total iodine/ ml.
	329	carbimazole	Tablet 5mg/10mg
19.Immunologicals			
19.1 Diagnostic agents			
All tuberculins should comply with the WHO requirements for tuberculins.			
	330	tuberculin, purified protein derivative (PPD)	Injection.
19.2 Sera and immunoglobulins			
All plasma fractions should comply with the WHO Requirements			
		Anti D immunoglobulin (human)	injection .250ug in single dose vial

	331	Anti-venom immunoglobulin	Injection.
	332	Anti hepatitis B immunoglobulin	injection
		Anti rabbies immunoglobulin(human)	Injection 150IU/ml in vial
		Anti tetanus immunoglobulin (human)	Injection: 500 IU in vial
	333	diphtheria antitoxin	Injection: 10 000 IU; 20 000 IU in vial.
19.3 Vaccines			
All the vaccines which are under Immunization Programme of Pakistan will be deemed included in NEML.All vaccines should comply with the WHO requirements for biological substances. WHO noted the need for vaccines used in children to be polyvalent. The new vaccines, which have been approved by National Technical Advisory Group on Immunization (NTAGI) and planned to be given under EPI, will be deemed to be included in NEML as and when listed in EPI. In future, the vaccines which are under consideration, if and when included in EPI, will also be deemed included from the date of inclusion in EPI.			
Recommendations for all	334	BCG vaccine	
	335	diphtheria vaccine	

	336	Haemophilus influenzae type b vaccine	
	337	hepatitis B vaccine	
	338	HPV vaccine	
	339	measles vaccine	
	340	pertussis vaccine	
	341	pneumococcal vaccine	
	342	poliomyelitis vaccine	
	343	rotavirus vaccine	
	344	rubella vaccine	
	345	tetanus vaccine	
Recommendations for certain regions	346	yellow fever vaccine	
Recommendations for some high-risk populations	347	cholera vaccine	
	348	hepatitis A vaccine	
	349	meningococcal meningitis vaccine	
	350	rabies vaccine	
	351	typhoid vaccine	
Recommendations for immunization programmes with certain characteristics	352	influenza vaccine (seasonal)	
	353	mumps vaccine	
	354	varicella vaccine	
20.Muscle Relaxants			
	355	atracurium	Injection: 10 mg/ ml (besylate).
	356	neostigmine	Injection: 500 micrograms in 1- ml ampoule; 2.5 mg (metilsulfate) in 1- ml ampoule.
			Tablet: 15 mg (bromide).
	357	suxamethonium	Injection: 50 mg (chloride)/ ml in 2- ml ampoule.

			Powder for injection (chloride), in vial.
	358	vecuronium	Powder for injection: 10 mg (bromide) in vial.
	359	pyridostigmine	Injection: 1 mg in 1- ml ampoule. Tablet: 60 mg (bromide).
	360	pancuronium	Inj containing pancuronium bromide 2mg/ml, 2ml
21.Opthalmological Preparations			
21.1 Anti-infective agents			
		aciclovir	Ointment: 3% W/W.
	361	moxifloxacin	Eye drops 0.5%W/V
	362	sodium cromoglycate	Eye drop 4% W/V
		gentamicin	Solution (eye drops): 0.3% (sulfate).
	363	ofloxacin	Solution (eye drops): 0.3%.
	364	tetracycline	Eye ointment: 1% (hydrochloride).
21.2 Anti-inflammatory agents			
		prednisolone	Solution (eye drops): 0.5% (sodium phosphate).
21.3 Local anaesthetics			
	365	tetracaine (a)	Solution (eye drops): 0.5% (hydrochloride). a Not in preterm neonates.
21.4 Miotics and antiglaucoma medicines			
	366	acetazolamide	Tablet: 250 mg.
	367	latanoprost	Solution (eye drops): latanoprost 50 micrograms/ml
	368	pilocarpine	Solution (eye drops): 2%; 4% (hydrochloride or nitrate).
	369	timolol	Solution (eye drops): 0.25%; 0.5% (as hydrogen maleate)
21.5 Mydriatics			
		atropine (a)	Solution (eye drops): 0.1%; 0.5%; 1% (sulfate). a >3 months.
		epinephrine (adrenaline)	Solution (eye drops): 2% (as hydrochloride).
21.6 Anti-vascular endothelial growth factor (VEGF) preparations			
	370	bevacizumab	Injection: 25 mg/ ml.
22.Oxytocics & Anti oxytocics			

22.1 Oxytocics			
	371	ergometrine	Injection: 200 micrograms (hydrogen maleate) in 1ml ampoule.
	372	misoprostol	Tablet: 200 micrograms. - Management of incomplete abortion and miscarriage; - Prevention and treatment of postpartum haemorrhage where oxytocin is not available or cannot be safely used . Vaginal tablet: 25 micrograms.
	373	oxytocin	Injection: 10 IU in 1- ml.
	374	mifepristone – misoprostol Where permitted under national law and where culturally acceptable.	Tablet 200 micrograms.
22.2 Antioxytocics (tocolytics)			
	375	nifedipine	Immediate-release capsule: 10 mg.
			Slow release Tablet 20mg
23.Peritoneal Dialysis Solution			
	376	intraperitoneal dialysis solution (of appropriate composition)	Parenteral solution.
24.Medicines for mental & Behavioural disorder			
24.1 Medicines used in psychotic disorders			
	377	chlorpromazine	Injection: 25 mg (hydrochloride)/ ml in 2- ml ampoule. . Oral liquid: 25 mg (hydrochloride)/5ml
			Tablet: 10mg,25mg,50mg 100 mg (hydrochloride).
	378	fluphenazine	Injection: 25 mg (decanoate or enantate) in 1- ml ampoule.
		haloperidol	Injection: 5 mg in 1- ml ampoule.
			Oral Liquid 2mg/ml
			Tablet: 0.5 mg,2 mg; 5 mg.
	379	risperidone	Solid oral dosage form: 0.25 mg to 6.0 mg.
	380	clozapine	Solid oral dosage form: 25 to 200 mg.

24.2 Medicines used in mood disorders			
24.2.1 Medicines used in depressive disorders		amitriptyline	Tab. Amitriptyline Hcl 10mg,25mg
		fluoxetine	Solid oral dosage form: 20 mg (as hydrochloride).
24.2.2 Medicines used in bipolar disorders		carbamazepine	Tablet (scored): 100 mg; 200 mg.
			Syrup: 100mg/5ml

	381	lithium carbonate	Solid oral dosage form: 300 mg.
		valproic acid (sodium valproate)	Tablet (enteric-coated): 200 mg; 500 mg (sodium valproate).
24.3 Medicines for anxiety disorders			
		diazepam	Tablet (scored): 2 mg; 5 mg.
24.4 Medicines used for obsessive compulsive disorders			
	382	clomipramine	Capsule: 10 mg; 25 mg (hydrochloride).
24.5 Medicines for disorders due to psychoactive substance use			
	383	nicotinereplacement therapy (NRT)	Chewing gum: 2 mg; 4 mg (as polacrilex).
			Transdermal patch: 5 mg to 30 mg/16 hrs; 7 mg to 21 mg/24 hrs.
	384	methadone	Concentrate for oral liquid: 5 mg/ ml; 10 mg/ ml (hydrochloride). Oral liquid: 5 mg/5 ml; 10 mg/5ml (hydrochloride).
25.Medicines acting on the Respiratory Tract			
25.1 Antiasthmatic and medicines for chronic obstructive pulmonary disease			
	385	beclometasone	Inhalation (aerosol): 50 micrograms (dipropionate) per dose; 100 micrograms (dipropionate) per dose (as CFC free forms).
			Respirator solution for use in nebulizers: 800 mcg / 2 ml.
	386	budesonide	Inhalation (aerosol): 100 micrograms per dose; 200 micrograms per dose.
		epinephrine (adrenaline)	Injection: 1 mg (as hydrochloride or hydrogen tartrate) in 1- ml ampoule.
	387	ipratropium bromide	Inhalation (aerosol): 20 micrograms/metered dose.
	388	salbutamol	Inhalation (aerosol): 100 micrograms (as sulfate) per dose.
			Injection: 50 micrograms (as sulfate)/ ml in 5-ml ampoule.
			Metered dose inhaler(aerosol): 100 . micrograms (as sulfate) per dose
			Respirator solution for use in nebulizers: 5 mg (as sulfate)/ ml.
			Tablets: 100 mg
	389	montelukast	sachet 4mg /sachet
			Tablet 4mg,5mg,10mg

	390	aminophylline	injection 25mg/ml
			Tablets: 100 mg ,200mg
			Syrup: 32 mg/5 ml
	391	theophylline	Slow release Tablet 125 mg,270mg and 350mg
			Syrup 120mg/5ml
26. Solution correcting, water, electrolyte & Acid Base Balance			
26.1 Oral			
		oral rehydration salts	Powder for solution.
26.2 Parenteral			
	392	glucose	Injectable solution: 5% (isotonic); 10% (hypertonic); 50% (hypertonic).
	393	glucose with sodium chloride	Injectable solution: 4% glucose, 0.18% sodium chloride (equivalent to Na+ 30 mmol/l, Cl- 30 mmol/l). Injectable solution: 5% glucose, 0.9% sodium chloride (equivalent to Na+ 150 mmol/l and Cl- 150 mmol/l); 5% glucose, 0.45% sodium chloride (equivalent to Na+ 75 mmol/l and Cl- 75 mmol/l).
	394	potassium chloride (D)	Solution: 11.2% in 20- ml ampoule (equivalent to K+ 1.5 mmol/ ml, Cl- 1.5 mmol/ ml). Solution for dilution: 7.5% (equivalent to
	395	sodium chloride	Injectable solution: 0.9% isotonic (equivalent to Na+ 154 mmol/L, Cl- 154 mmol/l).
	396	sodium hydrogen carbonate	Injectable solution: 1.4% isotonic (equivalent to Na+ 167 mmol/l, HCO3- 167 mmol/l). Solution: 8.4% in 10- ml ampoule (equivalent toNa+ 1000 mmol/l, HCO3-1000 mmol/l).
	397	sodium lactate, compound solution	Injectable solution.
		mannitol	Injectable solution: 20 %w/v (500ml)
26.3 Miscellaneous			
	398	water for injection	2- ml; 5- ml; 10- ml ampoules.
27.Vitamins & Minerals			
	399	ascorbic acid	Tablet: 50 mg.
	400	calcium	Tablet: 500 mg (elemental).
	401	cholecalciferol	Oral liquid: 400 IU/ ml.Solid oral dosage form: 400 IU; 1000 IU.

	402	ergocalciferol	Oral liquid: 250 micrograms/ ml (10 000 IU/ ml).Solid oral dosage form: 1.25 mg (50 000 IU).
	403	iodine	Capsule: 200 mg.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.
	404	nicotinamide	Tablet: 50 mg.
	405	pyridoxine	Tablet: 25 mg (hydrochloride).
	406	retinol	Capsule: 50 000 IU; 100 000 IU; 200 000 IU (as palmitate).
			Oral oily solution: 100 000 IU (as palmitate)/ ml in multidose dispenser
			Tablet (sugar-coated): 10 000 IU (as palmitate)
			Water-miscible injection: 100 000 IU (as palmitate) in 2- ml ampoule.
	407	riboflavin	Tablet: 5 mg.
	408	sodium fluoride	In any appropriate topical formulation.
	409	thiamine	Tablet: 50 mg (hydrochloride).
		calcium gluconate	Injection: 100 mg/ ml in 10- ml ampoule.
28.Ear,Nose & Throat Medicines			
	410	acetic acid	Topical: 2%, in alcohol.
		budesonide	Nasal spray: 100 micrograms per dose.
		ciprofloxacin	Topical: 0.3% drops (as hydrochloride).
	411	maggot Oil (Turpentine oil)	
	412	xylometazoline	Nasal spray: 0.05%. Not in children less than 3 months.
		gentamicin	Gentamicin 0.3%+hydrocortisone acetate 1%
29.Specific Medicines for Neonatal Care			
29.1 Medicines administered to the neonate			
	413	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].
		ibuprofen	Solution for injection: 5 mg/ ml.

	414	prostaglandin E	Solution for injection: Prostaglandin E1: 0.5 mg/ ml in alcohol.
			Prostaglandin E 2: 1 mg/ ml.
	415	surfactant	Suspension for intratracheal instillation: 25 mg/ ml or 80 mg/ ml.

29.2 Medicines administered to the mother			
		dexamethasone	Injection: 4 mg/ ml dexamethasone phosphate (as disodium salt)
30. Medicines for diseases of joint			
30.1 Medicines used to treat gout			
		allopurinol	Tablet: 100 mg.
30.2 Disease-modifying agents used in rheumatoid disorders (DMARDs)			
		azathioprine	Tablet: 50 mg.
		hydroxychloroquine	Solid oral dosage form: 200 mg (as sulfate).
		methotrexate	Tablet: 2.5 mg (as sodium salt).
		penicillamine	Solid oral dosage form: 250 mg.
		sulfasalazine	Tablet: 500 mg.
30.3 Juvenile joint diseases			
		acetylsalicylic acid (acute or chronic use)	Suppository: 50 mg to 150 mg.
			Tablet: 100 mg to 500 mg.

Supplementary List NEML 2016

(based on expert group recommendation)			
Therapeutic category	**Sr#**	**Name**	**Formulation**
1.Anaesthetics	1.	sevoflurane	Liquid for inhalation
	2.	glycopyrrolate	Injection 0.2mg/ml
	3.	pregabalin	ccapsules 75 mg,150mg & 300mg
	4.	tramadol	Capsules 50mg
			Inj 50mg/ml
3.Anti allergics & Medicines Used in Anaphylaxis	5.	pheniramine	Inj Pheniramine (Maleate):22.7mg/ml in 2ml ampoule equivalent to 25mg pheniramine salicylate
			Tablet 25mg,50mg ,
			elixir/syrup15mg/5ml
6.Antiinfective Medicines	6.	aztreonam	inj containing aztrreonam500mg, 1g,vial
	7.	moxifloxacin	Tablet 200 mg/ 400 mg
	8.	dihydroartemisinin+ piperquine	Film coated Tablet containing piperaquin tetraphosphate(as tetrahydrate +dihydroartemisinin,320+40mg & 160mg+20mg
7.Antimigraine Medicines(3)	9.	cinnarizine	Tablets containing cinnarizine 25mg
	10.	sumatriptan	Inj 6mg
			Tablets 50mg
9.AntiParkinsonism Medicines(3)	11.	Selegine	
10.Medicines affecting the blood	12.	tirofiban	inj0.25mg/ml
10.Medicines affecting the blood	13.	Iron Sucrose	Injection 20mg/ml
11.Blood Products of human origin & Plasma substitutes	14.	dextran 40	Injection 10%
	15.	adenosine	Injection 3mg /ml
12.2 Antiarrhythmic medicines	16.	labetaolol	Intravenous Injection 5mg/ml
12.3 Antihypertensive medicines	17.	Isoprenaline	Injection 1mg/ml (IV):
12.4 Medicines used in heart failure	18.	ephedrine	Injection 30mg/ml
12.6 Lipid-lowering agents	19.	atorvastatin	Tablet 10mg,20mg,40mg
	20.	risovastatin	Tablet,10,20,40mg
16.Diuretics (2)	21.	kayexalate	
28.Ear,Nose & Throat Medicines	22.	acetazolamide	IV, and 2 percent topical/ opthalmic solution
			Tablet 250 mg
18.Horomones,other endocrine medicines & contraceptives	23.	glibenclamide	Tablet 5mg

Alphabetical List NEML 2016

1.	abacavir (ABC)	2.	abacavir + lamivudine	3.	acetazolamide	4.	acetic acid
5.	acetylcysteine	6.	acetylsalicylic acid	7.	aciclovir	8.	adenosine
9.	albendazole	10.	alcohol based hand rub	11.	allopurinol	12.	all-trans retinoid acid (ATRA)
13.	amidotrizoate	14.	amikacin	15.	amiloride	16.	aminophyline
17.	amiodarone	18.	amitriptyline	19.	amlodipine	20.	amodiaquine
21.	amoxicillin	22.	amoxicillin + clavulanic acid	23.	amphotericin B	24.	ampicillin
25.	anastrozole	26.	Anti hepatitis B immunoglobulin	27.	anti-D immunoglobulin	28.	anti-rabies immunoglobulin
29.	anti-tetanus immunoglobulin	30.	Anti-venom immunoglobulin	31.	artemether artemether + lumefantrine	32.	artesunate
33.	artesunate + amodiaquine	34.	artesunate + mefloquine	35.	artesunate Plus Sulphadoxine and pyrimethamine	36.	ascorbic acid
37.	asparaginase	38.	atazanavir	39.	atenolol	40.	atracurium
41.	atropine	42.	azathioprine	43.	azithromycin	44.	barium sulfate
45.	BCG vaccine	46.	beclometasone	47.	bedaquiline	48.	bendamustine
49.	benzathine benzylpenicillin	50.	benzoyl peroxide	51.	benzyl benzoate	52.	benzylpenicillin
53.	betamethasone	54.	bevacizumab	55.	bicalutamide	56.	biperiden
57.	bisacodyl	58.	bleomycin	59.	bromazepam	60.	budesonide
61.	bupivacaine	62.	caffeine citrate	63.	calamine	64.	calcium
65.	calcium folinate	66.	calcium gluconate	67.	capecitabine	68.	capreomycin
69.	carbamazepine	70.	carbimazole carboplatin	71.	cefalexin	72.	cefazolin
73.	cefixime	74.	cefotaxime	75.	Cefradine	76.	ceftazidime

77.	ceftriaxone	78.	cefuroxime Sodium	79.	charcoal, activated	80.	chlorambucil
81.	chlorhexidine	82.	chlorine base compound	83.	chloroquine	84.	chloroxylenol
85.	chlorpheniramine	86.	chlorpromazine	87.	cholecalciferol	88.	cholera vaccine
89.	ciclosporin	90.	ciprofloxacin	91.	cisplatin	92.	clarithromycin
93.	clindamycin	94.	clofazimine	95.	clomifene	96.	clomipramine
97.	clopidogrel	98.	clotrimazole	99.	cloxacillin	100.	clozapine
101.	coagulation factor IX	102.	coagulation factor VIII	103.	coal tar	104.	codeine
105.	condoms	106.	copper-containing device	107.	cyclizine	108.	cyclophosphamide
109.	cycloserine	110.	cytarabine	111.	dacarbazine	112.	daclatasvir
113.	dactinomycin	114.	dapsone	115.	darunavir	116.	dasabuvir
117.	daunorubicin	118.	deferoxamine	119.	delamanid	120.	desmopressin
121.	dexamethasone	122.	dextran 70	123.	diaphragms	124.	diazepam
125.	diclofenac sodium	126.	diethylcarbamazine	127.	digoxin	128.	diloxanide Furoate
129.	dimercaprol	130.	diphtheria antitoxin	131.	diphtheria vaccine	132.	dobutamine
133.	docetaxel	134.	docusate sodium	135.	dopamine	136.	doxorubicin
137.	doxycycline	138.	efavirenz (EFV or EFZ)	139.	efavirenz + emtricitabine + tenofovir	140.	emtricitabine + tenofovir
141.	enalapril	142.	enoxaparin	143.	entecavir	144.	ephedrine
145.	epinephrine (adrenaline)	146.	ergocalciferol	147.	ergometrine	148.	estradiol cypionate + medroxyprogesterone acetate
149.	ethambutol	150.	ethambutol + isoniazid	151.	ethambutol + isoniazid + pyrazinamide	152.	ethambutol + isoniazid + rifampicin
153.	ethanol	154.	ethinylestradiol + norethisterone	155.	ethinylestradiol + o levonorgestrel	156.	ethionamide
157.	etonogestrel-releasing implant	158.	etoposide	159.	evonorgestrel-releasing intrauterine system	160.	ferrous salt

161.	ferrous salt + folic acid	162.	filgrastim	163.	fluconazole	164.	flucytosine
165.	fludarabine	166.	fludrocortisone	167.	fluorescein	168.	fluorouracil
169.	fluoxetine	170.	fluphenazine	171.	folic acid	172.	fomepizole
173.	fresh frozen plasma	174.	furosemide	175.	gemcitabine	176.	gentamicin
177.	gliclazide	178.	glucagon	179.	glucose	180.	glucose with sodium chloride
181.	glutaral	182.	glyceryl trinitrate	183.	griseofulvin	184.	Haemophilus influenzae type b vaccine
185.	haloperidol	186.	halothane	187.	heparin sodium	188.	hepatitis A vaccine
189.	hepatitis B vaccine	190.	HPV vaccine	191.	hydralazine	192.	hydrochlorothiazide
193.	hydrocortisone	194.	hydroxocobalamin	195.	hydroxycarbamide	196.	hyoscine butylbromide
197.	hyoscine hydrobromide	198.	ibuprofen	199.	ifosfamide	200.	imatinib
201.	imipenem + cilastatin	202.	influenza vaccine (seasonal)	203.	insulin injection (soluble)	204.	intermediate-acting insulin
205.	intraperitoneal dialysis solution	206.	iodine	207.	iohexol	208.	ipratropium bromide
209.	irinotecan	210.	isoflurane	211.	isoniazid	212.	isoniazid + pyrazinamide + rifampicin
213.	isoniazid + rifampicin	214.	Isoprenaline	215.	isosorbide dinitrate	216.	kanamycin
217.	ketamine	218.	lactulose	219.	lamivudine + nevirapine + stavudine	220.	lamivudine + nevirapine + zidovudine
221.	lamivudine + zidovudine	222.	lamivudine(3TC)	223.	latanoprost	224.	ledipasvir + sofosbuvir
225.	leuprorelin	226.	levamisole	227.	levodopa + carbidopa	228.	levofloxacin
229.	levonorgestrel	230.	levonorgestrel-releasing implant	231.	levothyroxine	232.	lidocaine
233.	lidocaine + epinephrine (adrenaline)	234.	linezolid	235.	lithium carbonate	236.	loperamide
237.	lopinavir + ritonavir (LPV/r)	238.	loratadine	239.	lugol′s solution	240.	maggot Oil (Turpentine oil
241.	magnesium sulfate	242.	mannitol	243.	measles vaccine	244.	mebendazole

245.	medroxyprogesterone acetate	246.	mefloquine	247.	meglumine antimoniate	248.	meglumine iotroxate
249.	meningococcal meningitis vaccine	250.	mercaptopurine	251.	meropenem	252.	mesna
253.	metformin	254.	methadone	255.	methotrexate	256.	methyldopa
257.	methylprednisolone	258.	methylthioninium chloride (methylene blue)	259.	metoclopramide	260.	metronidazole
261.	miconazole	262.	midazolam	263.	mifepristone	264.	miltefosine
265.	misoprostol	266.	montelukast	267.	morphine	268.	moxifloxacin
269.	mumps vaccine	270.	mupirocin	271.	naloxone	272.	neomycin sulphate +bacitracin zinc
273.	neostigmine	274.	nevirapine (NVP)	275.	niclosamide	276.	nicotinamide
277.	nicotine replacement therapy (NRT)	278.	nifedipine	279.	nitrofurantoin	280.	nitrous oxide
281.	norethisterone enantate	282.	normal immunoglobulin	283.	nystatin	284.	ofloxacin
285.	ombitasvir + paritaprevir + ritonavir	286.	omeprazole	287.	ondansetron	288.	oral rehydration salts
289.	oseltamivir	290.	oxaliplatin	291.	oxygen	292.	oxytocin
293.	paclitaxel	294.	p-aminosalicylic acid	295.	Pancreatic enzymes	296.	pancuronium
297.	paracetamo	298.	paromomycin	299.	pegylated interferon alfa (2a or 2b)	300.	penicillamine
301.	pentamidine	302.	permethrin	303.	pertussis vaccine	304.	phenobarbital
305.	phenoxymethylpenicillin	306.	phenytoin	307.	phytomenadione	308.	pilocarpine
309.	platelets	310.	pneumococcal vaccine	311.	podophyllum resin	312.	poliomyelitis vaccine
313.	potassium chloride	314.	potassium ferric hexacyano2H2O (Prussian lue) - ferrate(II) -	315.	potassium iodide	316.	potassium permanganate
317.	povidone iodine	318.	praziquantel	319.	prednisolone	320.	primaquine
321.	procaine benzylpenicillin	322.	procarbazine	323.	progesterone vaginal ring	324.	proguanil
325.	promethazine	326.	propofol	327.	propranolol	328.	propylthiouracil

329.	prostaglandin E	330.	protamine sulfate	331.	pyrantel	332.	pyrazinamide
333.	pyridostigmine	334.	pyridoxine	335.	pyrimethamine	336.	quinine
337.	rabies vaccine	338.	ranitidine	339.	red blood cells	340.	retinol
341.	ribavirin	342.	riboflavin	343.	rifabutin	344.	rifampicin
345.	rifampicin	346.	rifapentine	347.	risperidone	348.	ritonavir
349.	rituximab	350.	rotavirus vaccine	351.	rubella vaccine	352.	salbutamol
353.	salicylic acid	354.	saquinavir	355.	selenium sulfide	356.	sena
357.	silver sulfadiazine	358.	simeprevir	359.	simvastatin	360.	sodium calcium edetate
361.	sodium chloride	362.	sodium cromoglycate	363.	sodium fluoride	364.	Sodium hydrogen carbonate
365.	sodium lactate, compound solution	366.	sodium nitrite	367.	sodium nitroprusside	368.	sodium stibogluconate
369.	sodium thiosulfate	370.	sofosbuvir	371.	spironolactone	372.	stavudine(d4T)
373.	streptokinase	374.	streptomycin	375.	succimer	376.	sulfadiazine
377.	sulfamethoxazole + trimethoprim	378.	sulfasalazine	379.	surfactant	380.	suxamethonium
381.	tamoxifen	382.	tenofovir disoproxil fumarate (TDF)	383.	terbinafine	384.	testosterone
385.	tetanus vaccine	386.	tetracaine	387.	tetracycline	388.	theophylline
389.	thiamine	390.	thiopentone	391.	timolol	392.	tioguanine
393.	tranexamic acid	394.	trastuzumab	395.	trimethoprim	396.	tropicamide
397.	tuberculin, purified protein derivative (PPD)	398.	typhoid vaccine	399.	urea	400.	valganciclovir
401.	valproic acid (sodium valproate)	402.	vancomycin	403.	varicella vaccine	404.	vecuronium
405.	verapamil	406.	vinblastine	407.	vincristine	408.	vinorelbine
409.	warfarin	410.	water for injection	411.	whole blood	412.	xylometazoline
413.	yellow fever vaccine	414.	zidovudine (ZDV or AZT)	415.	zinc sulfate		

Appendix-II

Components of Mark Up-Imported Drugs

S.No.	Description	%age
1.	Product Expiry	02
2.	Warehouse and cold chain	02
3.	Salesmen salaries and travel	10
4.	Sales Promotion	03
5.	Samples	02
6.	General Administration	03
7.	Financial Charges	02
8.	Worker Welfare Fund	01
9.	Distribution expenses and discount	13
10.	Importer Profit	07
	Total	**45%**

(Amanullah)
Director, Costing & Pricing

The Manager,
Printing Corporation of Pakistan Press,
Islamabad.