

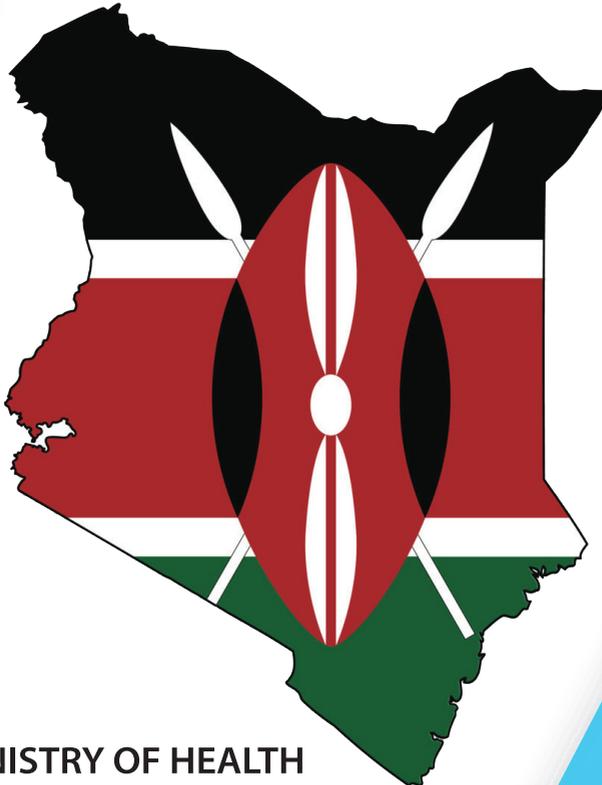


REPUBLIC OF KENYA



2023

**KENYA ESSENTIAL
MEDICINES LIST**



MINISTRY OF HEALTH

Kenya Essential Medicines List 2023

Published by the Ministry of Health

Ministry of Health
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¹ Proposals for amendments to the list should be submitted using the KEML Amendment Proposal Form (see Appendix 5)

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Foreword



The Kenya Essential Medicines List (KEML) is a key tool that should effectively be used to promote access to essential medicines, and through their correct selection, procurement, and use to achieve maximum therapeutic benefit and optimize patient outcomes as desired under Universal Health Coverage (UHC).

The rationale for listing medicines in the KEML 2023 was adopted from the globally coordinated process by the World Health Organization (WHO), which develops the Model Lists of Essential Medicines for both adults (23rd List, 2023) and children (9th List, 2023), and makes relevant information and knowledge available to countries for their own adaptation. The National Medicines and Therapeutics Committee (NMTC), through a Technical Working Group (TWG), coordinated collection and

adaptation of clinical evidence, held extensive stakeholder consultations, and referenced updated clinical and disease specific guidelines for this updated list.

The KEML should therefore be used with confidence and commitment as a highly relevant, evidence-based, and up-to-date reference document. The systematic and well-managed consensus-based process through which it has been produced has ensured the incorporation of current evidence-based best therapeutic practices backed by extensive scientific data and a robust application of selection criteria. Therefore, the selection of the items listed is well justified and suitably adapted to the prevailing health sector context. The methodology for review also made sure that the document adequately addressed medicine selection from healthcare levels 1 to 6 as guided by the Kenya Essential Package of Health (KEPH).

KEML is for use by - policymakers at national, county levels and facility levels; public, private, faith-based, and non-governmental organisation (NGO) actors; all disciplines of healthcare workers; general practitioners, specialists and healthcare management personnel; donors; pharmaceutical manufacturers and other relevant stakeholders.

The Government of Kenya will use the KEML 2023 to guide selection of medicines to be provided under all benefit packages for UHC and all health workers are expected to adhere to it. The regular and consistent use of the KEML is expected to improve healthcare, and to contribute to attaining UHC and the Constitutional right to health.

I therefore strongly encourage all relevant health professionals to make the best use of this KEML in their daily work and to provide feedback on its use, and any suggestions towards its improvement and future revisions.

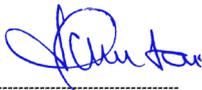
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Acknowledgements



We wish to acknowledge and sincerely thank all the contributors to this document – the National Medicines and Therapeutics Committee (NMTC) whose mandate includes development of Clinical Governance and Rational Use documents including essential Health Products & Technologies Lists; the KEML Review Technical Working Group; the Directorate of Health Products and Technologies that spearheaded the review process and was the TWG Secretariat; Ministry of Health officers in various Directorates and Divisions; various professional associations that reviewed categories of medicines in their areas of specialty and the Consultant who made this KEML 2023 a reality.

We also wish to thank the World Health Organisation (WHO) for the solid and objective evidence base and guidance provided by the Model Lists, to optimize the KEML as a priority-setting tool for achievement of UHC. Finally, we would also like to gratefully acknowledge the technical guidance and financial support provided by the United States Agency for International Development through the USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) program that is implemented by Management Sciences for Health.



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Executive Summary



The Kenya Essential Medicines List (KEML) 2023 builds on past efforts of reviewing the Kenya Essential Medicines List and ensures that medicines required at all the healthcare levels are included to guide efforts to improve access, in line with achieving Universal Health Coverage (UHC).

The Ministry of Health constituted the KEML Review TWG which was a multidisciplinary team of professionals to spearhead the review and ensure that the KEML is based on the most current clinical information, both globally and nationally. The KEML Review TWG convened a series of meetings and discussions with a variety of medical specialists as well as internal and external validation meetings to develop the list.

In KEML 2023, medicines are listed by 35 major therapeutic categories. Within each category, medicines are listed in alphabetical order as the international non-proprietary name (INN), dosage form, strength and the healthcare level of use indicated. For each medicine, the lowest level of use it should be available is indicated to guide procurement and patient management at various levels of healthcare.

Antibiotics have been classified into Access, Watch and Reserve (AWaRe) classes to guide the rational use of antibiotics in line with global guidance provided by the World Health Organisation and address antimicrobial stewardship efforts.

The KEML 2023 will serve as a useful tool for:

- » Healthcare financing and Essential medicines supply budgeting
- » Procurement, supply and distribution
- » Health insurance schemes
- » Managing Donations
- » Healthcare workforce development
- » Appropriate use of medicines
- » Antimicrobial resistance and use policies.

All health workers at all levels are encouraged to utilize the KEML 2023, as it is a crucial tool in advancing healthcare services for all Kenyans in line with the goals of Universal Health Coverage.



.....
Dr. Patrick Amoth, EBS
Director General for Health

Abbreviations & Acronyms

μCi	Microcurie
ACEI	Angiotensin-Converting-Enzyme Inhibitors
ads	Adsorbed
AIDS	Acquired Immunodeficiency Syndrome.
amp	Ampoule
AMR	Antimicrobial Resistance
ART	Antiretroviral Therapy
aq	Aqueous
AWaRe	Access, Watch, and Reserve
BCAA	Branched - Chain Amino Acids
BCG	Bacille Calmette Guerin
CAP	Community Acquired Pneumonia
CAPD	Continuous Ambulatory Peritoneal Dialysis
CCB	Calcium Channel Blocker
CHV	Community Health Volunteers
Ci	Curie
CKD	Chronic Kidney Disease
Cl-	Chloride Ion
CMV	Cytomegalovirus
CPT	Cotrimoxazole Preventive Therapy
CVD	Cardiovascular Diseases
DHPT	Directorate of Health Products and Technologies
DNCD	Division of Non-Communicable Diseases
DOH	Department of Health
DT	Dispersible Tablet
EADSG	East Africa Diabetes Study Group
e/c	Enteric Coated (Tablet)
eGFR	Estimated Glomerular Filtration Rate
EM	Essential Medicine
EML	Essential Medicines List
EMLc	Essential Medicines List For Children
ENT	Ear, Nose, Throat
f/c	Film Coated (Tablet)
FBF	Fortified Blended Food
FDC	Fixed Dose Combination
g	Grams
GBq	Gigabecquerel
GI	Gastrointestinal
GIT	Gastrointestinal Tract

HAP	Hospital Acquired Infection
HBV	Hepatitis B Virus
HCl	Hydrochloride Salt
HCTZ	Hydrochlorothiazide
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
HPT	Health Products and Technologies
hr	Hour
HSM	Health Systems Management
hyd	Hydrogen
ICU	Intensive Care Unit
Ig	Immunoglobulin
IM	Intramuscular
IPTp	Intermittent Preventive Treatment of Malaria
i/r or IR	Immediate Release
IU	International Units
IV	Intravenous
K+	Potassium Ion
KEML	Kenya Essential Medicines List
KEMSL	Kenya Essential Medical Supplies List
Kg	Kilogram
KMTC	Kenya Medical Training Centre
KNH	Kenyatta National Hospital
KUTRRH	Kenyatta University Teaching, Referral and Research Hospital
Kcal	Kilocalorie
L	Litre
LCT	Long-Chain Triglyceride
LoU	Level Of Use
m/r	Modified (Controlled, Delayed, Prolonged, Slow) Release
MAM	Moderate Acute Malnutrition
MAT	Medically Assisted Therapy
MBq	Megabecquerel
mcg	Micrograms
mCi	Millicurie
MCT	Medium-Chain Triglyceride
MDR-TB	Multidrug-Resistant Tuberculosis
Mg	Milligram
mL	Millilitre
mmol	Millimole
MMR	Mumps, Measles, Rubella

MoH	Ministry of Health
MPH	Ministry of Public Health
MRI	Magnetic Resonance Imaging
MRSA	Methicillin Resistant <i>Staphylococcus Aureus</i>
MSH	Management Sciences For Health
MTaPS	Medicines, Technologies, and Pharmaceutical Services Program
MTC	Medicines And Therapeutics Committee
MU	Mega (Million) Units
NASCOP	National AIDS And STI Control Programme
NGO	Non-Governmental Organization
NMTC	National Medicines and Therapeutics Committee
NRT	Nicotine Replacement Therapy
NSAIM	Non-Steroidal Anti-Inflammatory Medicine
ORS	Oral Rehydration Salt
p-	Para (E.G. In Para–Aminosalicylic Acid (Pas))
paed	Paediatric
PCP	Pneumocystis Jirovecii Pneumonia
PCV	Polysaccharide Conjugated Vaccine
PET	Positron Emission Tomography
PFI	Powder For Injection (To Be Reconstituted With Diluent)
PFOL	Powder For Oral Liquid (To Be Reconstituted With Diluent)
PN	Parenteral Nutrition
PPB	Pharmacy And Poisons Board
PPH	Postpartum Haemorrhage
ppm	Parts Per Million
PWUD	People Who Use Drugs
RA	Rheumatoid Arthritis
ReSoMal	Rehydration Solution For Malnutrition
RF	Rheumatic Fever
RHF	Rheumatic Heart Failure
RUSF	Ready-To-Use Supplementary Food
RUTF	Ready To Use Therapeutic Foods
SAM	Severe Acute Malnutrition
S/E	Side Effects
SC	Subcutaneous
sod.	Sodium
SODF	Solid Oral Dose Form (I.E. Tablet Or Capsule)
SPECT	Single Photon Emission Computed Tomography
SPF	Sun Protection Factor
spp.	Species
STI	Sexually Transmitted Infections

TB	Tuberculosis
TOR	Terms of Reference
TPN	Total Parenteral Nutrition
TT	Tetanus Toxoid
TU	Tuberculin Units
TWG	Technical Working Group
UHC	Universal Health Coverage
UON	University of Nairobi
USAID	United States Agency For International Development
UVB	Ultraviolet B (Radiation In Sunlight Rays)
VAP	Ventilator Associated Pneumonia
VEGF	Vascular Endothelial Growth Factor
Vit	Vitamin
vol	Volume
WHO	World Health Organization
w/w	Weight By Weight

Background

Access to Essential Medicines is a core component of the *right to health*, and a requisite to the attainment of national health goals. This national Essential Medicines List (EML) defines the priority focus for investment in medicines for the health sector, towards ensuring the provision of equitable healthcare to the population in line with defined sector policies, strategies, norms and standards.

This EML is based on the Concept of **Essential Medicines**, defined by the World Health Organisation (WHO) as those that:

- » Meet **priority healthcare needs** of the population.
- » Should be carefully and systematically selected using an *evidence-based process* with due consideration of:
 - **public health relevance**
 - clear evidence on **efficacy** and **safety**
 - comparative **cost-effectiveness**
- » Should always be available in a functioning healthcare system:
 - in **adequate amounts**
 - in **appropriate dosage forms**
 - with **assured quality** and **adequate information**
 - at an **affordable price** for the individual and community.

This KEML is derived from the WHO Model List 23rd edition (Adults) of 2023 and 9th edition (Children) of 2023 and various current national guidelines for general and disease specific conditions which represent the best current therapeutic practice in each of the priority conditions covered.

The WHO Model List of Essential Medicines

The World Health Organisation (WHO) is the Secretariat for the Expert Committee on Selection and Use of Essential Medicines, the group of experts responsible for revising and updating the Model List of Essential Medicines (EML) and the Model List of Essential Medicines for Children (EMLC). Every medicine listed is vetted for efficacy, safety, and quality, and is subjected to a comparative cost-effectiveness evaluation with other alternatives in the same class of medicines. WHO updates the lists every two years and act as an important guide for governments and institutions around the world, in the development of their own essential medicines' lists.

Listing a new medicine on the WHO EML is a first step towards improving access to innovative medicines that show clear clinical benefits and could have enormous public health impact globally. The **AWaRe classification** for antibiotics is intended to incorporate antibiotic stewardship so as to reduce and contain antimicrobial resistance (AMR) globally.

Access antibiotics have activity against a wide range of commonly encountered susceptible pathogens while showing low potential for development of resistance. These are antibiotics of choice for treatment of the topmost common infectious diseases in a country. They should be always available, be affordable and quality assured. In the WHO EML, they are listed as essential first-choice or second-choice empirical treatment options for specific infectious diseases.

Watch antibiotics have higher resistance potential or higher toxicity concerns. They should be prioritized as key targets of national and local stewardship programs and monitoring. In the WHO EML, they are listed as essential first-choice or second-choice empirical treatment options recommended only for a limited number of specific infectious diseases. Unlike Access antibiotics which have lower priority for AMR stewardship activities, use of Watch antibiotics should be actively monitored.

Reserve antibiotics should be reserved for treatment of confirmed or suspected infections due to multi drug-resistant organisms and treated as "last-resort" options. While they must be accessible when required, their use should be limited to highly specific patients and clinical settings, when other antibiotic alternatives have failed or are not suitable, for example, due to contra-indications. They should be protected and prioritized as key targets of national and international AMR stewardship programmes, involving monitoring and utilization reporting, to preserve their effectiveness.

The goal of the AWaRe classification for antibiotics is to reduce the use of antibiotics in the Watch and Reserve groups (the antibiotics most crucial for human medicine and at higher risk of resistance) while increasing the use of Access antibiotics where low availability has been experienced.

WHO recommends that each country compare its current list of essential antibiotics list against the WHO

AWaRe list and based on gathered evidence of local epidemiology of infectious diseases and antibiotic resistance profile of the causative micro-organisms in the country, then list its own antibiotics as Access or Watch class first-choice or second-choice options as well as Reserve class.

The purpose of the Model List is to provide guidance for the prioritization of medicines from a clinical and public health perspective. The hard work of implementation of the EML begins with efforts to ensure that those medicines are available to patients. This requires collaborative effort between governments, the private sector, civil society, WHO and other international partners. Unlike the two separate WHO model lists, the KEML incorporates medicines for both adults and children.

The National Medicines and Therapeutics Committee (NMTC)

The role of NMTC is critically important in identifying appropriate medicines and other Health Products and Technologies (HPT) for use throughout the system and for guiding utilization of the same. The NMTC is the national clinical coordinating body, as well as the reference point for all activities with HPT-related components. NMTCs are a vital structure for ensuring evidence-based therapeutics, as part of a comprehensive quality of care program. Its mandate includes the development or review of several clinical governance documents such as clinical treatment guidelines, national formulary, and essential HPT lists.

In addition, county governments, healthcare institutions and health facilities are encouraged to form similar Medicines and Therapeutics Committees (MTCs), to promote evidence-based processes that ensure the selection and use of those medicines that address the needs and priorities of the populations they serve.

KEML Review Process

Preliminary review

Preparatory work for updating the KEML started in 2021, when the Ministry of Health developed the Kenya National Medicines Formulary (KNMF). There were many submissions that were received during the development process for consideration for the next KEML. MoH received many submissions using the KEML Amendment Form over the last one year from various practitioners and specialists from public, private, and faith-based sector on suggestions for the next edition of the KEML.

Establishment of the KEML Review Technical Working Group

In June 2022, after sufficient consultation, the TWG for the KEML review process was identified and appointed by the Director General for Health.

The KEML Review TWG is expected to adhere to WHO guidance on how to develop a National Essential Medicines List, which involves the establishment of a robust, scientific methodology to ensure the production of a credible and reliable output anchored in best scientific (evidence-based) practice. Members are also expected to sign forms for managing conflict of interest.

The KEML Review TWG is expected to select medicines for listing in the KEML 2023, while applying the essential medicines concept and principles of rational selection, affordability, and sustainable financing, as well as engaging with and consulting with all the relevant experts and stakeholders in the review process.

Preparation of key KEML review tools

In September, the 2021 WHO Model Lists (22nd edition for adults, 8th edition for children) were made available online, necessitating start of the review of the KEML 2023 in comparison with all sets of clinical guidelines which had been either developed/updated from 2019. These references provided additional useful comparison representing current clinical practice in Kenya. Further reference was made to relevant international documents such as the British National Formulary.

Preparing the tool for the review of the KEML preceded the commencement of the review process in February 2023. A consultant recruited through the support of the USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) program was very useful in this preparatory work and throughout the review process. The spreadsheet-based review tool looked at the following:

- » A Yes List comparing whether a medicine is listed on the WHO model list (EML/EMLC) with the KEML 2019 and identifying all items on the model list but not the KEML for consideration for possible inclusion.
- » A No List comparing the KEML 2019 with the model list and identifying all items on the KEML but not on the model list for consideration for deletion.
- » Comparison of the above two lists to the essential medicines listed in 2019 and in national standard treatment guidelines and protocols as well as, where relevant, international guidelines and protocols for consideration for possible inclusion/deletion
- » Guidance from the infectious diseases specialists in classifying the antibiotics into AWaRe categorisation based on local evidence.

Undertaking the KEML review

Following the comparison of the KEML 2019 and WHO model lists, the KEML Review TWG convened workshops followed by numerous consultations with various specialists in all key therapeutic areas. TWG members were taken through the criteria to guide the listing of medicines. Members signed a form declaring their lack of conflict of interest to ensure transparency, impartiality, and objectivity in their mandate.

Using the WHO Model Lists and the tool developed for the review, and through careful application of Essential Medicines principles and selection criteria, members of the KEML TWG carried out a systematic and thorough review of each essential medicine, discrepancies and issues requiring clarification were identified and discussed, and consensus was reached on required amendments to the KEML.

In July 2023 WHO Model Lists (23rd edition for adults, 9th edition for children) were made available online. A review of major changes on the lists was done comparing the draft KEML 2023 with the updated WHO Model lists. The secretariat and consultant especially checked at new additions requested in KEML 2023 and whether they were included in the updated model lists.

During the review process, important practice issues (especially relating to current inappropriate use of medicines by health professionals) were also identified for further action. Thereafter, internal, and external validation meetings were convened for more inputs.

KEML Revision and Amendment Procedure

It is anticipated that the KEML will be reviewed *regularly* and updated at least every 2 years, depending on the nature and extent of cumulative amendments required. Urgent amendments will be disseminated as required through the already established coordination forums or other mechanisms for communication within the healthcare system.

The NMTC will spearhead the review and revision of future editions of the Clinical Management Guidelines and national essential HPT lists [Kenya Essential Medicines List (KEML), Kenya Essential Medical Supplies List (KEMSL) and Kenya Essential Diagnostics List (KEDL)] as guided by:

- » Feedback obtained from operational research on KEML use in each of the key medicines management areas.
- » Reports on KEML use obtained through feedback by users and during supportive supervision.
- » MoH-approved changes in disease management protocols (with concurrent changes to the relevant Clinical Guidelines)
- » Changes made to the biannual WHO Model Lists
- » Results of other relevant health research into disease management and medicines utilisation
- » New product information provided by medicine manufacturers.
- » New information arising through quality assurance systems, including pharmacovigilance and post-market surveillance, and
- » Completed and submitted KEML Amendment Proposal Forms received from users.

Essential Medicines Selection Criteria

Inclusion of a medicine on the EML should be considered if the medicine, as far as reasonably possible, meets the following criteria:

1. **Relevance/Need:** *Public health relevance:* Contribution towards meeting the *priority health care needs* of the population; seriousness of public health consequences if the condition is untreated/ not well managed.
2. **Safety:** *Scientifically proven and acceptable safety* (side-effects and toxicity) in its expected way of use.
3. **Comparative efficacy:** *Proven and reliable efficacy compared with available alternatives* (based on adequate and scientifically sound data from clinical studies) and items already listed in the KEML under review, where applicable.
4. **Quality:** *Compliance with internationally accepted quality standards*, as recognized by the national medicines' regulatory authority (in Kenya, the Pharmacy and Poisons Board), including stability under expected conditions of storage and use.
5. **Performance:** *Sufficient evidence of acceptable performance* in a variety of settings (e.g., levels of health care).
6. **Comparative cost-benefit:** *a favourable cost-benefit ratio* (in terms of total treatment costs) compared with available alternatives.
7. **Local Suitability/Appropriateness:** whether the medicine is appropriate for use in the local context

taking into consideration cultural, environmental, and other factors such as possible barriers.

8. **Pharmacokinetic profile:** Wherever possible the medicine should have favourable pharmacokinetic properties (absorption, distribution, metabolism, and excretion; drug interactions).
9. **Local production:** Whenever possible, the medicine should be locally manufactured (for improved availability, reduced procurement costs).
10. **Local registration and availability:** consideration whether the medicine is registered and/or retained by PPB. It is anticipated that selected products that are not yet registered will be fast-tracked for registration.
11. **Availability:** the medicine should be available and registered by Pharmacy and Poisons Board. If it is essential and is not in the Kenyan market, it can still be included in the list and mechanisms put in place to ensure it is made available for the country.
12. **Human resource & Infrastructure capacity:** whether use of the medicine requires specialised training, diagnostic, handling, monitoring or other skills; at what level of care such skills would be present. This determines the level of use the medicine is placed on the list.
13. **Equity:** whether the addition of the item to the KEML would result in diversion of scarce funding from medicines of higher priority/required by larger number of patients; whether the longer-term effect of not having the medicine would result in costlier care for the patient, e.g., potential disability.

Main Uses of the KEML

The KEML aims to support the smooth functioning of the healthcare system and radically improve the availability and appropriate use of medicines, for improved health status of the population. The health sector will realize the full benefits of the KEML when it is routinely, appropriately and fully utilized in the following key areas:

1. **Healthcare financing and essential medicine supply budgeting:** The KEML should be used as a basis for prioritization of investment of available healthcare finances and, together with accurate quantification of HPT needs, for the estimation of required annual medicines supply budgets *at all levels of the healthcare system*.
2. **Health insurance schemes:** Medicines are a major cost element in healthcare financing for Government, insurance schemes and partners. The list is therefore a good basis for selection of medicines for implementing the health benefits package in the context of UHC. As the health sector explores a comprehensive healthcare financing system, the KEML should be used as the basis for expanding coverage and to guide the reimbursement of medicines costs.
3. **Procurement, warehousing & distribution:** The KEML should be used as a basis for determining medicines procurement requirements for all healthcare levels. This applies equally to public, faith-based, non-governmental organization (NGO), private sector and other actors. Use of the KEML will help focus management efforts on a needs-based and prioritized list of critical items and can greatly improve the functioning and efficiency of medicine supply systems.
4. **Management of Donations:** Potential medicine donors and recipients should use the KEML to determine the most appropriate types and presentations of medicines for donation to meet public health priorities, including health emergencies. This should be guided by the national Policy on Donation of medicines and health products.
5. **Healthcare workforce development:** Up-to-date clinical guidelines and the KEML should be key references in the training of healthcare personnel, to provide correct orientation on evidence-based management of health conditions, as well as to guide appropriate prescribing, dispensing and use of medicines. This includes pre- and in-service training, as well as continuous professional education for human resources for health (HRH).
6. **Medicines regulation and monitoring (including quality assurance):** The KEML should be used as a basis for ensuring an effective system of regulation of all activities involving medicines (including import, export, local production, registration, levels of distribution/use, quality monitoring, post-market surveillance, pharmacovigilance, prescribing and dispensing). The KEML should guide medicines regulation decision-making, aimed at enhancing access to Essential Medicines. This may include fast-tracking registration and incentives to stimulate local pharmaceutical production of listed medicines.
7. **Appropriate use of medicines:** The KEML should be used as a basis for designing strategies and initiatives to promote the correct use of medicines by health professionals, patients and the public. Such activities should focus on promoting and improving utilization of Essential Medicines (on the KEML) as the most appropriate for attaining maximum health benefits.

8. In particular, the KEML should be used as the focus of surveys, studies, operational research by the National Medicines & Therapeutics Committee (NMTc) and institutional MTCs, with the aim of improving the availability, affordability, prescribing, dispensing and use of medicines for greater public health impact. It should also be used as a basis for appropriate and effective monitoring and control measures applicable to medicines e.g., antibiotics.
9. **AMR and antibiotic use policies:** The KEML 2023 has classified antibiotics into 3 classes recommended by WHO i.e., Access, Watch and Reserve (AWaRe), which is also in line with the Kenya National Policy for the Prevention and Containment of Antimicrobial Resistance.
10. **Medicines policy monitoring and operational research:** Up-to-date clinical guidelines and the KEML should be used to identify parameters for monitoring, evaluation and operational research in the health sector, with the aim of ensuring the continued relevance of medicines and pharmaceutical policies to current healthcare requirements; as well as establishing the required evidence base for effective, systematic and regular KEML review and revision.
11. **Pharmaceutical manufacturing:** The KEML should be used as a basis for local manufacturing decisions focusing on priority public health products and formulations. Incentives for local production should primarily target products listed on the KEML.

Presentation of Information in the KEML

In this KEML 2023, broad therapeutic differences are used to list medicines into 35 major categories. Within each category, medicines appear in alphabetical order and with the appropriate dosage forms indicated, the strength/size and the level of use (LoU).

The listing does not imply preference for one medicine over another. For each medicine, the lowest level of use has been indicated to guide procurement and patient management at the various levels.

Categorization of antibiotics into Access, Watch and Reserve (AWaRe) classes has been retained as was introduced in KEML 2019 to guide the appropriate use of antibiotics.

Certain products have been designated as Restricted in the footnotes to allow for their use to be under appropriate and effective additional monitoring and control measures. For example, items that are costly and require provision through insurance reimbursement, items restricted to certain programs or health conditions, among others.

Level of Use

This indicates the lowest level of the healthcare delivery system at which each medicine may reasonably be expected to be appropriately used (i.e., after correct diagnosis and a correct decision on management of the condition according to current best therapeutic practice).

It is thus the *lowest level* at which the medicine is expected to be available for use (i.e., distributed, stored, prescribed, and dispensed).

The current levels are as follows:

1. Community health services
2. Dispensary/clinic
3. Health centre
4. Primary hospital
5. Secondary hospital
6. Tertiary hospital

Summary of Main Changes in KEML 2023

The process of developing this KEML has resulted in significant changes to the items listed in the previous KEML 2019. The changes comprise additions of medicines that were previously not on the list, deletions of medicines that are either considered obsolete, or where other alternatives are considered more cost-effective based on available evidence; as well as changes to presentations to facilitate better administration and use. In addition, medicines have been classified appropriately to improve access in line with Universal Health Coverage.

The summary below highlights the main changes made in preparation of the KEML 2023.

Amendments Summary

Additional formulation (Across multiple indications)	32
Additional indications (Across different formulations and strengths)	35
Additional strengths / size	67
Additions - (Includes FDCs but excludes additional formulation, indication, strength/size)	179
Amendments (Includes changes in footnotes and descriptions and merged items)	113
Change in LOU	60
Deletions - (Includes deletions from subsections)	68
Reclassification	16
Title / subtitle change including new subtitles / titles / categories	22
Net increase from 2019	264

KEML 2023 Totals

Total medicines 696

Total list entries 1,335

Kenya Essential Medicines List 2023

#	Name of Medicine	Dose-form	Strength / Size	LOU
1. ANAESTHETICS, PRE- & INTRA-OPERATIVE MEDICINES and MEDICAL GASE				
1.1 General Anaesthetics				
1.1.1 Inhalational medicines				
1.1.1.1	Halothane	Inhalation	250mL	4
1.1.1.2	Isoflurane	Inhalation	250mL	4
1.1.1.3	Sevoflurane ²	Inhalation	250mL	5
1.1.2 Injectable medicines				
1.1.2.1	Dexmedetomidine ³	Injection	200 micrograms/2mL	5
1.1.2.2	Etomidate ⁴	Injection	2mg/mL (10mL Vial)	6
1.1.2.3	Fentanyl ⁵	Injection	50micrograms/mL (2mL Ampoule)	4
1.1.2.4	Ketamine	Injection	50mg (as HCL)/mL (10mL vial)	4
1.1.2.5	Midazolam ⁶	Injection	1mg (as HCl)/mL (5mL amp)	4
1.1.2.6	Propofol ⁷	Injection	10mg/mL (20mL vial)	4
1.1.2.7	Remifentanyl ⁸	PFI	2mg/2mL	5
1.1.2.8	Thiopental sodium ⁹	PFI	500mg vial	4
1.2 Local Anaesthetics <i>For spinal, epidural, caudal or IV regional anaesthesia, use preservative-free injections.</i>				
1.2.1	Bupivacaine	Injection	0.5% (as HCl) (10mL vial)	4
1.2.2	Bupivacaine + Glucose ¹⁰	Injection	0.5% (as HCl) (5mg/mL) + glucose 8% (80mg/mL) (4mL amp)	4

2 Use in critically ill geriatric, paediatric and cardiovascular patients.

3 Use in theatre and ICU in anaesthetic and sedation.

4 or anaesthetic induction in high-risk cardiac surgery patients because of its hemodynamic stability including patients with cardiac disease for non-cardiac surgery and patients with cardiac disease for cardiac surgery.

5 Use for induction of anaesthesia, ICU sedation, Adjunct in Spinal Anaesthesia in Obstetrics.

6 Use as induction agent for anaesthesia.

7 Thiopental may be used as an alternative where Propofol is not available.

8 Use in ICU and Theatre for critically ill patients.

9 Has delayed awakening.

10 Also referred to as 'heavy spinal' or 'hyperbaric (heavy)'. May be available with glucose 7.5% (75mg/mL).

#	Name of Medicine	Dose-form	Strength / Size	LOU
1.2.3	Lignocaine ¹¹	Injection	2% (as HCl) (30mL vial)	2
			2% (as HCl)	2
		Topical spray	4% (as HCl)	2
			10% (as HCl)	2
1.2.4	Lignocaine + Epinephrine (Adrenaline)	Dental cartridge	2% + 1:80,000 (1.8mL cartridge)	3
		Injection ¹²	2% (HCl or sulphate) + 1:200,000 in vial	3
1.3 Pre-and Intra-Operative Medication and Sedation for Short-Term Procedures and Adjuncts for Spinal and Epidural Anaesthesia				
1.3.1	Dantrolene ¹³	Injection	20mg	4
1.3.2	Dexmedetomidine ¹⁴	Injection	200 micrograms (2mL)	5
1.3.3	Ephedrine ¹⁵	Injection	30mg	4
1.3.4	Epinephrine (adrenaline) ¹⁶	Injection	1mg /1mL amp ¹⁷	4
1.3.5	Fentanyl ¹⁸	Injection (preservative-free)	50 micrograms (as citrate)/mL (2mL amp)	4
1.3.6	Ketamine ¹⁹	Injection	50mg (as HCl)/mL (10mL vial)	4
1.3.7	Midazolam ²⁰	Injection	1mg (as HCl)/mL (5mL amp)	4
			5mg (as HCl)/mL (3mL amp) ²¹	4
1.3.8	Morphine	Injection	10mg (as HCl or sulphate) /1mL amp	4
			10mg/mL (1mL Ampoule) Preservative free ²²	5

11 Also known as lidocaine

12 Use for suturing of minor cuts, and in eye surgeries under local anaesthesia.

13 Use for management of malignant hyperthermia and neuroleptic malignant syndrome due to drug-induced muscular hyperactivity.

14 Can be used in short-term procedures for sedation/anaesthesia.

15 Adjunct medicine. For use in spinal anaesthesia during delivery for prevention of hypotension. Also used as antidote (vasopressor) for ACEI drug overdose.

16 Confirm the manufacturer's recommended route of administration as different salts of adrenaline may be administered by different routes.

17 Strength may also be expressed as 1 in 1,000 or 0.1%.

18 Restricted for intra-operative use only. Rapid onset, short-acting. May also be adjunct to spinal anaesthesia.

19 Can be used in short-term procedures for sedation/anaesthesia.

20 Can be used in short-term procedures for sedation/anaesthesia.

21 For ICU sedation for infusion.

22 Adjunct for spinal and epidural anaesthesia.

#	Name of Medicine	Dose-form	Strength / Size	LOU
1.3.9	Ondansetron ²³	Injection	2mg/mL (2mL Ampoule)	4
1.3.10	Phenylephrine ²⁴	Injection	10mg/mL Hydrochloride 1mL	5
1.3.11	Propofol ²⁵	Injection	10mg/mL (20mL vial)	4
1.3.12	Remifentanyl	PFI	2mg/2mL	5
1.4 Medical gases				
1.4.1	Medical air	Inhalation (medical gas)		4
1.4.2	Nitrous oxide	Inhalation (medical gas)		4
1.4.3	Oxygen ²⁶	Inhalation (medical gas)		2
2. MUSCLE RELAXANTS (PERIPHERALLY ACTING), CHOLINESTERASE INHIBITORS and ANTICHOLINERGICS				
2.1 Muscle relaxants				
2.1.1	Atracurium	Injection	10mg (as besilate)/mL (5mL amp)	4
2.1.2	Cisatracurium	Injection	2mg (as besilate)/mL (10mL amp)	4
2.1.3	Rocuronium	Injection	10mg/mL (as bromide), 5mL vial	5
2.1.4	Suxamethonium ²⁷	Injection	50mg (as chloride)/mL (2mL amp)	4
2.1.5	Vecuronium	PFI	10mg (as bromide) vial [c]	6

23 Antiemetic used for Post operative nausea and vomiting.

24 Adjunct medicine. Use for intractable hypotension after epidural/ spinal anaesthesia.

25 Can be used in short-term procedures for sedation/anaesthesia.

26 For use in management of hypoxaemia. No more than 30% oxygen should be used to initiate resuscitation of neonates ≤ 32 weeks of gestation.

27 Also known as "Succinylcholine". Not to be used in children at high risk of malignant hyperthermia.

#	Name of Medicine	Dose-form	Strength / Size	LOU
2.2 Cholinesterase Inhibitors				
2.2.1	Neostigmine	Injection	2.5mg (as metasulphate)/1mL amp	4
2.2.2	Pyridostigmine	Tablet	60mg (as bromide)	5
		Injection	5mg/mL, 2mL, Ampoule	6
		Oral Solution	60mg/5mL, 240mL	6
2.3 Anticholinergics				
2.3.1	Atropine	Injection	1mg (as sulphate)/1mL amp	4
2.3.2	Glycopyrronium ²⁸	Injection	200 micrograms (as bromide)/mL	4
3. MEDICINES for PAIN and PALLIATIVE CARE				
3.1 Non-Opioids and Non-Steroidal Anti-Inflammatory Medicines (NSAIDs) <i>Use NSAIDs with caution in patients with renal disease and cardiac conditions.</i>				
3.1.1	Acetylsalicylic acid (Aspirin)	Tablet	300mg	2
3.1.2	Celecoxib ²⁹	Tablet	200mg	4
3.1.3	Dexketoprofen	Tablet ³⁰	25mg	4
		Injection ³¹	25mg/mL (2mL amp)	5
3.1.4	Ibuprofen	Oral liquid	100mg/5mL [c] ³²	2
		Tablet	200mg	2
3.1.5	Ketorolac ³³	Injection (IM/IV)	30mg/mL	2

28 Use for neuromuscular blockade reversal, or intraoperative reduction of cholinergic effects in surgery.

29 Use for long-term pain management in patients with history of dyspepsia or GI bleeding. If history of GI bleeding, use with PPI.

30 More potent than Ibuprofen and has less respiratory side-effects, e.g., in those susceptible to asthmatic attacks

31 Use in management of moderate to severe pain, intra-operative and post-operative pain.

32 Do not use in children aged <3 months old.

33 Use for acute pain management (≤5 days)

#	Name of Medicine	Dose-form	Strength / Size	LOU
3.1.6	Paracetamol	Injection (for IV infusion) ³⁴	10mg/mL (100mL vial)	4
		Oral liquid	120mg/5mL [c]	1
		Suppository	125mg [c]	2
		Tablet (scored)	500mg	1
3.2 Opioid analgesics				
3.2.1	Dihydrocodeine phosphate ³⁵	Tablet	30mg	4
3.2.2	Fentanyl	Transdermal patch	25 micrograms/hr ³⁶	5
			50 micrograms/hr ³⁷	5
3.2.3	Methadone ³⁸	Tablet ³⁹	5mg	4
		Oral Solution ³⁹	1mg/mL	4
3.2.4	Morphine ⁴⁰	Injection	10mg (as HCl or sulphate)/1mL amp	4
		Injection (for Infusion) ⁴¹	30mg/mL	4
		Oral liquid	1mg (as HCl or sulphate)/mL	3
		Oral liquid	10mg (as HCl or sulphate)/mL	3
		Tablet (m/r)	30mg (sulphate)	4
3.2.5	Oxycodone ⁴²	Tablet (i/r)	5mg (as HCl)	6
3.2.6	Tramadol ⁴³	Capsule	50mg	5
		Injection	50mg/mL (2mL amp)	5

34 Not for anti-inflammatory use (no proven benefit). Use only for management of Intraoperative pain.

35 RESTRICTED. Use only in adults for moderate pain management.

36 Releasing approximately 25 micrograms/hour for 72 hours. For the management of cancer pain.

37 Releasing approximately 50 micrograms/hour for 72 hours. For the management of cancer pain.

38 To be prescribed by specially trained palliative care professionals.

39 Note difference in formulation with methadone listed in section 25 for medically assisted therapy.

40 To be prescribed by specially trained palliative care professionals.

41 Use for patients with chronic pain who are feeding poorly. Use with Morphine pump.

42 Used as an alternative to morphine.

43 Useful for mixed neuropathic and nociceptive pain; It is an atypical opioid, useful for management of moderate to severe pain.

#	Name of Medicine	Dose-form	Strength / Size	LOU
3.3 Adjuncts for pain Management and Medicines for other Symptoms in Palliative Care				
3.3.1	Amitriptyline	Tablet	25mg	2
3.3.2	Bisacodyl	Tablet	5mg	2
3.3.3	Carbamazepine ⁴⁴	Tablet (scored)	200mg	4
3.3.4	Dexamethasone	Injection	4mg (as sodium phosphate)/1mL amp	3
		Tablet	500 micrograms	3
		Tablet (scored)	4mg	3
3.3.5	Diazepam	Injection	5mg/mL (2mL amp)	4
		Tablet (scored)	5mg	4
3.3.6	Gabapentin ⁴⁵	Tablet	300mg	4
3.3.7	Haloperidol ⁴⁶	Injection	5mg/1mL amp	3
		Tablet (scored)	5mg	3
3.3.8	Hyoscine butylbromide	Injection	20mg/1mL amp	3
		Tablet ⁴⁷	10mg	3
3.3.9	Lactulose	Oral liquid	3.1-3.7g/5mL	4
3.3.10	Loperamide	Capsule	2mg	3
3.3.11	Metoclopramide ⁴⁸	Injection	5mg/mL (2mL amp)	4
		Tablet	10mg	2
3.3.12	Midazolam ⁴⁹	Injection	1mg (as HCl)/mL (5mL amp)	5

44 Adjunct in management of trigeminal neuralgia.

45 Use for Neuropathic pain management.

46 For short-term use in patients (end-of-life care).

47 RESTRICTED. For use in patients with cancer only. Use in management of small stomach syndrome and smooth muscle pain.

48 Metoclopramide should only be prescribed for short-term use (up to 3 days). Thereafter, review need for use. Not for use in Children.

49 Use for delirium and terminal restlessness.

#	Name of Medicine	Dose-form	Strength / Size	LOU
3-3-13	Ondansetron	Injection ⁵⁰	2mg (as HCl)/mL (2mL amp)	2
		Oral liquid ⁵¹	4mg base/5mL [c]	2
		Tablet ⁵²	4mg (as HCl)	2
3-3-14	Prednisolone	Oral liquid	15mg/5mL [c]	4
		Tablet	5mg	4
3-3-15	Pregabalin ⁵³	Capsule	25mg	5
			75mg	5
3-3-16	Senna ⁵⁴	Tablet	7.5mg	4
4. ANTIALLERGICS and MEDICINES used in ANAPHYLAXIS				
4.1	Cetirizine	Tablet	10mg	2
		Oral liquid	1mg/mL	2
4.2	Chlorpheniramine	Injection ⁵⁵	10mg (as maleate)/1mL amp	2
		Oral liquid ⁵⁶	2mg (as maleate)/5mL	2
4.3	Dexamethasone	Injection	4mg (as sodium phosphate)/1mL amp	4
4.4	Diphenhydramine ⁵⁷	Injection	50mg/mL	4
4.5	Epinephrine (adrenaline) ⁵⁸	Injection	1mg /1mL amp	2
4.6	Hydrocortisone	PFI	100mg (as sod. succinate) vial	2
4.7	Loratadine	Tablet	10mg	2

50 Not for use in first trimester of pregnancy. Use only in children >6 months old.

51 Use only in children >6 months old.

52 Not for use in first trimester of pregnancy. Use only in children >6 months old.

53 Use in the management of neuropathic pain, diabetic neuropathy, and post-herpetic neuralgia.

54 Use as a stimulant laxatives and Opioid-Induced Constipation.

55 Use only for management of anaphylactic reactions and unspecified inflammatory reactions.

56 Use only in children >1 year old.

57 Use for allergic reactions, status migrainosus. Not to be used in neonates and premature infants.

58 Strength may also be expressed as 1 in 1,000 or 0.1%

#	Name of Medicine	Dose-form	Strength / Size	LOU
4.8	Prednisolone	Oral liquid	15mg/5mL [c]	4
		Tablet	5mg	4
5. ANTIDOTES and OTHER SUBSTANCES used in POISONINGS				
5.1 Non-specific				
5.1.1	Activated Charcoal	PFOL	50g	2
5.2 Specific				
5.2.1	Acetylcysteine	Injection	200mg/mL (10mL amp ⁵⁹)	4
5.2.2	Atropine	Injection	1mg (as sulphate)/1mL amp	2
5.2.3	Calcium folinate ⁶⁰	Injection	10mg/mL (5mL vial)	4
5.2.4	Calcium gluconate ⁶¹	Injection	100mg/mL in 10mL amp	3
5.2.5	Deferasirox ⁶²	Tablet	100mg	4
			400mg	4
5.2.6	Deferoxamine ⁶³	PFI	500mg (as mesilate) vial	4
5.2.7	Ethanol	Injection ⁶⁴	100% (10mL amp)	4
		Oral liquid (Medicinal) ⁶⁵	95-96%	4
5.2.8	Fomepizole ⁶⁶	Injection	5mg (as sulphate)/mL (20mL amp)	5
5.2.9	Flumazenil ⁶⁷	Injection	100 micrograms/mL (5mL amp)	4

59 Acetylcysteine injection solution may be administered orally for children and adults.

60 Use in management of Methanol poisoning.

61 Use in management of hyperkalaemia.

62 Used to reduce chronic iron overload in patients who are receiving long-term blood transfusions for conditions such as beta- thalassemia and other chronic anaemias.

63 Use in management of Acute Iron poisoning.

64 Pharmaceutical grade (i.e., BP, EP, USP); for use in Methanol poisoning. Also known as dehydrated or absolute alcohol. For administration as a 10% solution in glucose 5% IV infusion.

65 Pharmaceutical grade (i.e., BP, EP, USP); for use in Methanol poisoning. Also known as Medicinal Ethyl Alcohol. For dilution (1 part + 4 parts water) before use as a 20% solution; if unavailable, use ethanol 40% solution (e.g., vodka).

66 Use in management of Methanol poisoning.

67 Use in management of sedative effects of benzodiazepines.

#	Name of Medicine	Dose-form	Strength / Size	LOU
5.2.10	Lipid emulsion ⁶⁸	Injection	20% (200 to 500mL)	4
5.2.11	Naloxone ⁶⁹	Injection	400 micrograms (as HCl)/1mL amp	4
5.2.12	Phytomenadione (Vit K1) ⁷⁰	Injection	10mg/mL (1mL amp)	4
5.2.13	Pralidoxime ⁷¹	PFI	1g (as chloride or mesilate) vial	4
5.2.14	Protamine ⁷²	Injection	10mg/mL (as sulphate) (5mL amp)	4
5.2.15	Sodium hydrogen carbonate (Sodium bicarbonate) ⁷³	Injectable solution	8.4% (10mL amp)	4
5.2.16	Sodium nitrite ⁷⁴	Injection	30mg/mL (10mL amp)	4
5.2.17	Sodium thiosulphate ⁷⁵	Injection	250mg/mL (50mL amp)	4
5.2.18	Succimer [Dimercaptosuccinic acid (DMSA)] ⁷⁶	Capsule	100mg	5
6. ANTICONVULSANTS/ANTIEPILEPTICS				
6.1	Acetazolamide	Tablet	250mg	5
			500mg	5
6.2	Carbamazepine	Oral liquid	100mg/5mL	4
		Tablet (cross-scored)	200mg	4
6.3	Clobazam	Tablet	10mg (scored)	4
6.4	Clonazepam	Tablet	0.5mg	4
			2mg	4
6.5	Diazepam ⁷⁷	Rectal gel	5mg/mL (0.5mL tube)	2

68 Antidote for systemic local anaesthesia toxicity.

69 Not for use in neonates.

70 Use as Antidote for Warfarin.

71 Use in management of Organophosphate poisoning.

72 Use as a specific antagonist to neutralize heparin.

73 Use in management of Methanol poisoning and for alkalinisation of urine in management of majority of drug overdose poisoning cases.

74 Should be procured and used together with Sodium thiosulphate in management of cyanide poisoning.

75 Should be procured and used together with Sodium nitrite in management of cyanide poisoning.

76 Use in management of heavy metal poisoning: Lead (symptomatic/asymptomatic), Mercury, Arsenic, Copper, Bismuth, Antimony.

77 If not available, use diazepam injection solution 5mg/mL instead, administered rectally by syringe – without

#	Name of Medicine	Dose-form	Strength / Size	LOU
6.6	Gabapentin	Tablet	300mg	4
			100mg	4
6.7	Lamotrigine ⁷⁸	Tablet	25mg	4
			100mg	4
		Tablet, (chewable, dispersible)	5mg	4
			25mg	4
6.8	Levetiracetam	Injection (IV) ⁷⁹	500mg	5
		Oral Solution	100mg/mL	5
		Tablet (scored) ⁸⁰	500mg	4
6.9	Lorazepam ⁸¹	Injection	4mg/1mL amp	2
6.10	Magnesium sulphate ⁸²	Injection	500mg/mL (50%), (10mL amp/vial)	2
6.1	Midazolam	Injection	1mg (as HCl)/mL (5mL amp) ⁸³	4
			5mg (as HCl)/mL (3mL amp) ⁸⁴	4
		Oromucosal solution ⁸⁵	5mg/mL	4
			10mg/mL	4
6.12	Oxcarbazepine	SODF	150mg	4
			300mg	4

the needle!

78 Use as adjunctive therapy for treatment-resistant partial or generalized seizures.

79 Use for partial or generalized seizures as an alternative to Phenytoin. Alternative for patients when oral administration is temporarily not feasible.

80 Use for partial or generalised seizures as an alternative to Phenytoin. For use in adolescents and pregnant women

81 Intravenous Lorazepam is a first-line treatment for convulsive status epilepticus.

82 First-line treatment in eclampsia and severe pre-eclampsia in pregnant women. Not for use in other convulsant disorders. Provides 5g per 10mL amp/vial.

83 Management of status epilepticus for seizures refractory to second line treatment. For buccal administration when solution for oromucosal administration is not available.

84 Management of status epilepticus for seizures refractory to second line treatment. For buccal administration when solution for oromucosal administration is not available.

85 Management of status epilepticus for seizures refractory to second line treatment

#	Name of Medicine	Dose-form	Strength / Size	LOU
6.13	Phenobarbital (Phenobarbitone) sodium	Injection	30mg/1mL amp [c] ⁸⁶	2
			200mg/1mL amp	2
		Tablet (scored)	30mg	2
6.14	Phenytoin sodium	Injection	50mg/mL (5mL vial)	4
			Oral liquid	30mg/5mL
		Tablet / Capsule	50mg	4
			100mg	4
6.15	Pregabalin	Capsule	25mg	4
			75mg	4
6.16	Topiramate	Tablet	25mg	5
			50mg	5
6.17	Valproic acid (Sodium Valproate)	Injection ⁸⁷	100mg/mL (4mL amp)	4
			100mg/ mL (10mL amp)	4
		Oral liquid	200mg/5mL	4
			Tablet (e/c)	200mg
		500mg		4
		Tablet (crushable)	100mg	4
7. ANTI-INFECTIVE MEDICINES				
7.1 Anthelmintics				
7.1.1 Intestinal Anthelmintics				
7.1.1.1	Albendazole	Tablet (chewable) ⁸⁸	400mg	1
		Suspension ⁸⁹	100mg/5mL	1

86 Use for paediatric emergencies.

87 Treatment of epilepsy in patients normally maintained on oral sodium valproate, and for whom oral therapy is temporarily not possible. Not for use in women of childbearing potential.

88 Do not use in 1st trimester of pregnancy.

89 For use in children aged 1 to 2 years.

#	Name of Medicine	Dose-form	Strength / Size	LOU
7.1.1.2	Mebendazole ⁹⁰	Tablet (chewable, dispersible)	500mg	1
7.1.1.3	Praziquantel	Tablet (scored)	600mg	1
7.1.2 Antifilarials <i>Management of lymphatic filariasis to be done with triple therapy regimen comprising Albendazole + Diethylcarbamazine dihydrogen citrate + Ivermectin</i>				
7.1.2.1	Albendazole	Tablet (chewable)	400mg	1
		Suspension ⁹¹	100 mg/5 mL	1
7.1.2.2	Diethylcarbamazine (DEC)	Tablet (scored)	100mg (as dihydrogen citrate)	1
7.1.2.3	Ivermectin	Tablet (scored)	3mg	1
7.2 Antibacterials				
7.2.1 Access Group Antibiotics				
7.2.1.1	Amikacin ⁹²	Injection	50mg (as sulphate)/mL in 2ml vial [c]	4
			250mg (as sulphate)/mL in 2ml vial	4
7.2.1.2	Amoxicillin ⁹³	Tablet (dispersible, scored)	250mg	2
		PFOL	125mg/5mL ((as trihydrate)	2
			250mg/5mL ((as trihydrate)	2
		Capsule	500mg	2

90 Teratogenic. Contraindicated in pregnancy. RESTRICTED USE. Used in the program 'Breaking transmission strategy'.

91 For use in children aged 1 to 2 years.

92 Use only under close monitoring by a specialist due to its high toxicity. For treatment of severe gram-negative infections in combination with other susceptible antibiotics.

93 Use for treatment of shigellosis and community-acquired pneumonia (CAP); also, in treatment of pharyngitis, sinusitis and otitis media; Also used as alternative to benzathine penicillin in prophylaxis of rheumatic fever; Prophylaxis of infective endocarditis before dental procedures. Should not be used at community level - CHVs to refer to level 2.

#	Name of Medicine	Dose-form	Strength / Size	LOU
7.2.1.3	Amoxicillin + clavulanic acid ⁹⁴	PFOL	200mg (as trihydrate) + 28mg (as potassium salt) / 5mL	4
			125mg (as trihydrate) + 31.25mg (as potassium salt)/5mL	4
			250 mg (as trihydrate) + 62.5 mg (as potassium salt)/5mL	4
		Tablet (dispersible, scored)	250mg + 62.5mg (i.e., 312.5 mg)	4
		Tablet	875mg + 125mg (i.e., 1g)	4
		PFI ⁹⁵	500mg + 100mg (i.e., 600mg)	4
1g + 200mg (i.e., 1.2gm)	4			
7.2.1.4	Ampicillin ⁹⁶	PFI	500mg vial	4
7.2.1.5	Benzathine benzylpenicillin ⁹⁷	PFI	900mg (1.2MU) vial	2
7.2.1.6	Benzylpenicillin ⁹⁸	PFI	600mg (1MU) (as sodium or potassium salt) vial	2
			3g (5MU) (as sodium or potassium salt) vial	4
7.2.1.7	Cefalexin ⁹⁹	PFOL	125mg/5mL	2
		Capsule	250mg	2
7.2.1.8	Cefazolin ¹⁰⁰	PFI	500mg (as sodium salt) in vial	4
			1g (as sodium salt) in vial	4

94 Also called Co-amoxiclav; strength may be expressed as the total of the components. Use for treatment of community-acquired pneumonia (CAP), exacerbations of chronic obstructive pulmonary disease (COPD), and febrile neutropenia (high/low risk).

95 Use for treatment of community-acquired pneumonia (CAP), exacerbations of chronic obstructive pulmonary disease (COPD), and febrile neutropenia (high/low risk). Second choice for Urinary tract infection (Complicated) Pyelonephritis, Septic arthritis (by Strep. pyogenes).

96 RESTRICTED. Use in treatment of Listeria, for intra-partum prophylaxis, GI endoscopy (only recommended for high-risk patients undergoing high risk procedures).

97 Use in treatment of selected STIs, and prophylaxis of RF, RHF.

98 At Level 2 facilities, use only in pre-referral management of a very sick child (with Gentamicin). For use in children with Gentamicin in treatment of severe community acquired pneumonia (CAP); also used in treatment of cellulitis (severe); neonatal sepsis, children with severe acute malnutrition.

99 For MSSA, Soft tissue infections, affordable.

100 Recommended for surgical prophylaxis. For use in patients of all ages.

#	Name of Medicine	Dose-form	Strength / Size	LOU
7.2.1.9	Doxycycline ¹⁰¹	Tablet / Capsule	100mg (as hyclate)	2
7.2.1.10	Flucloxacillin	Capsule ¹⁰²	250mg (as sodium salt)	2
			500mg (as sodium salt)	2
		PFOL ¹⁰²	125mg (as sodium salt)/5mL	2
		PFI ¹⁰³	500mg (as sodium salt) vial	4
7.2.1.11	Gentamicin ¹⁰⁴	Injection	10mg/mL (as sulphate) (2mL vial)	3
			40mg/mL (as sulphate) (2mL vial)	3
7.2.1.12	Metronidazole	Injection ¹⁰⁵	5mg/mL (100mL vial)	4
		Oral liquid ¹⁰⁶	200mg/5mL (as benzoate)	2
		Tablet (f/c, scored)	400mg	2
7.2.1.13	Nitrofurantoin ¹⁰⁷	Oral liquid	25mg/5mL [c]	2
		Tablet	100mg	2
7.2.1.14	Phenoxymethylpenicillin (Penicillin V) ¹⁰⁸	PFOL	250mg (as potassium salt) /5mL	3
		Tablet	250mg (as potassium salt)	3
7.2.1.15	Tinidazole ¹⁰⁹	Tablet (f/c)	500mg	2

101 Use in treatment of cholera, chlamydia, rickettsia, and mycoplasma. Moderate cellulitis and selected STIs. Contraindicated in pregnancy and children less than 12 years. Used in children less than 12 years of age only for life-threatening infections when no alternative exists.

102 Use in treatment of Septic arthritis (due to Strep. pyogenes), moderate cellulitis.

103 Use in treatment of Septic arthritis (due to Strep. Pyogenes), acute osteomyelitis (due to S. aureus), osteomyelitis in newborns, moderate cellulitis.

104 Use with parenteral penicillin in treatment of severe community acquired pneumonia in children; in treatment of severe acute malnutrition in children; neonatal sepsis.

105 Use for treatment of complicated intra-abdominal infections; with other antibiotics in management of appendectomy and colorectal infections (due to Enteric gram –ve bacilli, anaerobes).

106 Use for treatment of complicated intra-abdominal infections, management of severe acute malnutrition (children)

107 Use for treatment of uncomplicated urinary tract infection/cystitis.

108 Use for treatment of cellulitis (moderate, (in confirmed Strep. infections); also used in children with sickle cell anaemia. Also called Penicillin V.

109 Used for treatment of complicated intra-abdominal infections. Useful longer-acting alternative to metronidazole.

#	Name of Medicine	Dose-form	Strength / Size	LOU
7.2.2 Watch Group antibiotics				
7.2.2.1	Azithromycin ¹¹⁰	Tablet (scored)	500mg (anhydrous)	2
		PFOLE	200mg/5mL	2
7.2.2.2	Cefixime ¹¹¹	Tablet	400mg (as trihydrate)	2
7.2.2.3	Cefotaxime ¹¹²	Powder for Injection	500mg	4
			1gm	4
7.2.2.4	Ceftazidime ¹¹³	PFI	250mg (as pentahydrate) vial	4
			1g (as pentahydrate) vial	4
7.2.2.5	Ceftriaxone	Injection (IM/IV)	250mg (as sodium salt) [c] ¹¹⁴	4
			1g (as sodium salt) ¹¹⁵	4
7.2.2.6	Cefuroxime	PFI ¹¹⁶	750mg	4
7.2.2.7	Ciprofloxacin	Tablet (scored) ¹¹⁷	500mg (as HCl)	4
		Injection ¹¹⁸	400mg	5

110 Use in treatment of community-acquired pneumonia (CAP) in children and adults, especially in patients hypersensitive to penicillin; first line in management of selected STIs in combination with other antibiotic(s); cholera (children).

111 RESTRICTED. Use at Level 2 is restricted to syndromic management of STIs only. First line treatment for selected STIs; 2nd line agent for the common susceptible bacterial infections such as acute rhinosinusitis, pharyngitis, tonsillitis, cellulitis, uncomplicated UTIs

112 Used in the management of severe neonatal sepsis in combination with Crystalline penicillin as an alternative for Gentamicin. Cefotaxime is also indicated for use in place of Ceftriaxone in obviously Jaundiced children. NB: Cefotaxime is a safer cephalosporin in the first 7 days of life.

113 Use for treatment of hospital acquired pneumonia (HAP), febrile neutropenia (high risk). For specialist 2nd line use only where required laboratory diagnostic support and clear antibiotic use protocols are available

114 Use for treatment of complicated intra-abdominal infections; osteomyelitis (acute) in patients with sickle cell anaemia; hospital acquired sepsis, septic arthritis, among others. Do not administer with calcium; avoid in infants with hyperbilirubinemia (only use if >41 weeks corrected gestational age)

115 Second line treatment for selected STIs. At Level 2, use restricted to treatment of selected STIs. Use for treatment of meningitis (adults); complicated intra-abdominal infections; osteomyelitis (acute) in patients with sickle cell anaemia; hospital acquired sepsis, septic arthritis, among others. Do not administer with calcium.

116 Surgical prophylaxis for suspected susceptible bacteria in surgical procedures as a single agent or in combination, such as orthopaedic surgery, gastrointestinal procedures, cardiology procedures, obstetrics and gynaecology procedures.

117 Use in treatment of Urinary tract infection (complicated) pyelonephritis; febrile neutropenia (Low risk); complicated intra-abdominal infections.

118 As an option in management of HAP; VAP.

#	Name of Medicine	Dose-form	Strength / Size	LOU
7.2.2.8	Clarithromycin ¹¹⁹	Tablet (scored)	500mg	4
7.2.2.9	Clindamycin ¹²⁰	Capsule	150mg (as HCl)	4
		Injection ¹²¹	150mg (as phosphate)/mL (2mL vial)	4
		Oral liquid	75mg (as palmitate) /5mL [c]	4
7.2.2.10	Cotrimoxazole (Sulfamethoxazole + Trimethoprim)	Injection ¹²²	80mg + 16mg (i.e., 96mg)/ mL (5mL amp)	4
		Oral liquid ¹²³	200mg +40mg (i.e., 240mg) /5mL [c]	2
		Tablet (scored) ¹²³	800 + 160mg (i.e., 960mg)	2
7.2.2.11	Erythromycin ¹²⁴	Tablet	250mg	3
			500mg	3
7.2.2.12	Piperacillin + Tazobactam ¹²⁵	PFI	4g (as sodium salt) + 500mg (as sodium salt)	5
7.2.3 Reserve group antibiotics				
7.2.3.1	Ceftazidime + avibactam ¹²⁶	PFI	2000mg+500mg	5
7.2.3.2	Colistin ¹²⁷	PFI	1MU (as colistemetate sodium) vial	5
7.2.3.3	Fosfomycin	Granules for oral suspension ¹²⁸	3g sachet	5
		PFI ¹²⁹	3g (as sodium) vial	5

119 Use only in combination medicine regimens for treatment of H. pylori infection in adults.

120 Use as second choice in treatment of cellulitis (moderate, severe); specialist use only in bone & joint infections and secondary bacterial infections.

121 1st choice in Necrotizing fasciitis.

122 RESTRICTED. Use only for treatment of Pneumocystis jirovecii pneumonia (PCP), and infection with Stenotrophomonas (Xanthomonas) maltophilia.

123 RESTRICTED. Use only for prophylaxis against selected opportunistic infections in patients with HIV; treatment of Pneumocystis jirovecii pneumonia (PCP), and infection with Stenotrophomonas (Xanthomonas) maltophilia

124 Use as a macrolide option in URTI.

125 Restricted only to Hospitals with ICU. Use under close monitoring with prescribing only by a specialist. Use in treatment of Ventilator-associated pneumonia (VAP).

126 For management of extensively resistant gram-negative pathogens. To be prescribed by ID specialist.

127 Reserved for susceptible MDR infections.

128 Restricted only to Level 5 & 6 Hospitals. Use under close monitoring with prescribing only by a specialist. Use as second choice treatment of urinary tract infection (uncomplicated/cystitis).

129 Restricted only to Level 5 & 6 Hospitals. Use under close monitoring with prescribing only by a specialist. Use in treatment of urinary tract infection (due to E. coli).

#	Name of Medicine	Dose-form	Strength / Size	LOU
7.2.3.4	Linezolid ¹³⁰	Injection (IV)	2mg/mL in 300mL bag	5
		Tablet	600mg	5
7.2.3.5	Meropenem ¹³¹	PFI	500mg (as trihydrate)	5
7.2.3.6	Polymyxin B ¹³²	PFI	500,000 IU vial	5
7.2.3.7	Teicoplanin ¹³³	Injection	200mg	5
7.2.3.8	Tigecycline ¹³⁴	PFI	50mg vial	5
7.2.3.9	Vancomycin ¹³⁵	PFI	500mg vial (as HCl)	5
7.2.4 Antileprosy medicines <i>These Anti-leprosy medicines to be used only in combination, never individually, to prevent emergence of drug resistance.</i>				
7.2.4.1	Clofazamine	Capsule	50mg	4
			100mg	4
7.2.4.2	Dapsone	Tablet	100mg	4
			25mg	4
7.2.4.3	Rifampicin (R)	Tablet / Capsule	150mg	4
			300mg	4
7.2.5 Antituberculosis medicines <i>Antituberculosis treatment must always be with FDCs +/- additional relevant individual drugs.</i>				

130 Restricted only to Level 5 & 6 Hospitals. Use under specialist supervision for treatment of severe cellulitis, acute osteomyelitis including in patients with sickle cell anaemia. Toxicities with prolonged duration of use; myelosuppression, peripheral and optic neuropathy, C. diff colonization.

131 Restricted only to Level 5 & 6 Hospitals. Use under specialist supervision for treatment of ventilator acquired pneumonia (VAP); hospital acquired sepsis; hospital acquired pneumonia (HAP); complicated intra-abdominal infections. Use only in patients aged > 3 months.

132 Reserved for susceptible MDR infections.

133 Restricted only to Level 5 & 6 Hospitals. Use under specialist supervision for prophylaxis and treatment of serious infections caused by Gram-positive bacteria, including methicillin-resistant Staphylococcus aureus (MRSA) and Enterococcus faecalis. Close monitoring of patient under specialist supervision required as hematologic adverse drug reactions have been reported with use of this medicine.

134 Restricted only to Level 5 & 6 Hospitals. Use under specialist supervision for treatment of complicated intra-abdominal or skin infections especially in critically ill patients. Not for use in children/adolescents <18 years as its safety and efficacy not established.

135 Restricted only to Level 5 & 6 Hospitals. Use under specialist supervision for treatment of serious infections caused by methicillin-resistant Staphylococcus aureus (MRSA). Close monitoring of patient under specialist supervision required as hematologic adverse drug reactions have been reported with use of this medicine.

#	Name of Medicine	Dose-form	Strength / Size	LOU
7.2.5.1 Single medicines				
7.2.5.1.1	Ethambutol (E)	Tablet, (dispersible)	100mg	2
		Tablet	400mg	2
7.2.5.1.2	Isoniazid (H)	Tablet	50mg (scored)	2
			100mg	2
			300mg	2
		Injection	100mg/mL	4
7.2.5.1.3	Pyrazinamide (Z)	Tablet	500mg	2
			150mg (scored)	2
		Tablet, (dispersible)	150mg	2
7.2.5.1.4	Rifampicin (R)	Capsule	150mg	2
			300mg	2
		PFI	600mg	4
7.2.5.2 Fixed dose combinations (FDCs)				
7.2.5.2.1	Rifampicin + Isoniazid (RH)	Tablet	150mg + 75mg	2
			75mg + 50mg [c]	2
7.2.5.2.2	Rifampicin + Isoniazid + Pyrazinamide (RHZ)	Tablet	75mg + 50mg + 150mg [c]	2
7.2.5.2.3	Rifampicin + Isoniazid + Pyrazinamide + Ethambutol (RHZE)	Tablet	150mg + 75mg + 400mg + 275mg	2
7.2.5.2.4	Rifapentine + Isoniazid (3HP)	Tablet	300mg+300mg	5
7.2.5.3 Medicines for treatment of multi-drug resistant Tuberculosis (MDR-TB) <i>Medicines for the treatment of multidrug-resistant tuberculosis (MDR-TB) should be used in specialized centres adhering to WHO standards for TB control.</i>				
7.2.5.3.1	Amikacin (Am)	Injection	1g (as sulphate) vial	3
7.2.5.3.2	Amoxicillin + clavulanic acid (Amx+Clv)	Tablet	875mg + 125mg (1g)	3
7.2.5.3.3	Bedaquiline (Bdq)	Tablet	100mg	3

#	Name of Medicine	Dose-form	Strength / Size	LOU
7.2.5.3.4	Clofazimine (Cfx)	Capsule	50mg	3
			100mg	3
7.2.5.3.5	Cycloserine (Cs)	Tablet	125mg [c]	3
			250mg	3
7.2.5.3.6	Delamanid (DIm)	Tablet	50mg	3
7.2.5.3.7	Imipenem + Cilastatin	PFI	250mg + 250mg vial	3
			500mg + 500mg vial	3
7.2.5.3.8	Levofloxacin (Lfx)	Tablet (dispersible)	100mg [c]	3
		Tablet	250mg	3
			500mg (scored)	3
			750mg	3
7.2.5.3.9	Linezolid (Lzd)	Tablet (dispersible)	150mg [c]	3
		Tablet	600mg	3
7.2.5.3.10	Moxifloxacin (Mfx)	Tablet (dispersible)	100mg [c]	3
		Tablet	400mg	3
7.2.5.3.11	p-aminosalicylic acid (PAS)	Granules	4g sachet	3
7.2.5.3.12	Prothionamide (Pto)	Tablet	250mg	3
7.2.5.3.13	Terizidone (Trd)	Tablet	300mg	3
7.2.5.3.14	Pretomanid ¹³⁶	Tablet	200mg	3
7.3 Antifungal Medicines				
7.3.1	Amphotericin B ¹³⁷	PFI	50mg (as sodium deoxycholate) vial	4
		Injection	(Liposomal) 50mg vial	4
7.3.2	Clotrimazole ¹³⁸	Vaginal Tablet	500mg	2

136 Indicated for MDR-TB in combination with other anti-TB medicines.

137 RESTRICTED. Use only in treatment of invasive fungal infections, e.g., fungal meningitis.

138 Recommended for candida vaginitis.

#	Name of Medicine	Dose-form	Strength / Size	LOU
7.3.3	Fluconazole	Tablet / Capsule	150mg ¹³⁹	2
			200mg	4
		Injection ¹⁴⁰	2mg/mL (100mL bottle)	4
			Oral liquid	50mg/5mL
7.3.4	Flucytosine ¹⁴¹	Capsule	250mg	4
		Injection	2.5g/250mL	4
7.3.5	Griseofulvin ¹⁴²	Tablet	125mg	2
			500mg	2
7.3.6	Itraconazole ¹⁴³	Capsule	100mg	5
7.3.7	Nystatin	Oral liquid (suspension)	100,000 IU/mL [c]	2
7.3.8	Posaconazole ¹⁴⁴	Tablet (Delayed Release)	100mg	6
		Injection	18mg/mL (300mg/16.7mL)	6
7.3.9	Terbinafine	Tablet	125mg	4
			250mg	4
7.3.10	Voriconazole ¹⁴⁵	Tablet	200mg	5
		PFI	200mg vial	5

139 Only for use in treatment of relevant STIs. Use at Level 2 restricted to STI syndromic management.

140 Recommended for use in invasive fungal infection.

141 Use only in treatment of Cryptococcal Meningitis (CM). Flucytosine is the preferred 1st line for treatment of CM (according to WHO) in combination with another antifungal. Patient requires close monitoring by specialists.

142 Refer for LFT monitoring in prolonged use (>4 weeks).

143 For treatment of chronic pulmonary aspergillosis, histoplasmosis, sporotrichosis, paracoccidioidomycosis, mycoses caused by *T. marneffeii* and chromoblastomycosis; and prophylaxis of histoplasmosis and infections caused by *T. marneffeii* in AIDS patients.

144 Use for prophylaxis of *Aspergillus* and *Candida* infections in patients who are at high risk due to being severely immunocompromised e.g., hematologic malignancies patients with prolonged neutropenia due to chemotherapy. Also for management of *Mucormycosis* as an alternative to amphotericin B.

145 Use for acute invasive aspergillosis.

#	Name of Medicine	Dose-form	Strength / Size	LOU
7.4 Antiviral Medicines				
7.4.1 Antih herpes medicines				
7.4.1.1	Acyclovir ¹⁴⁶	PFI	250mg vial (as sodium salt)	4
		Tablet (scored)	400mg	2
7.4.2 Antiretrovirals <i>Essential medicines for treatment and prevention of HIV (prevention of mother-to-child transmission and post-exposure prophylaxis). Use of fixed dose combination (FDC) medicines for Antiretroviral therapy (ART) is recommended.</i>				
7.4.2.1 Nucleoside/Nucleotide Reverse Transcriptase Inhibitors (NRTI)				
7.4.2.1.1	Abacavir (ABC) ¹⁴⁷	Tablet	300mg	2
		Oral Solution	20 mg/mL	2
7.4.2.1.2	Lamivudine (3TC)	Oral liquid	50mg/5mL	2
7.4.2.1.3	Tenofovir Alafenamide (TAF)	Tablet	25mg	2
7.4.2.1.4	Tenofovir disoproxil fumarate (TDF) ¹⁴⁸	Tablet	300mg	2
7.4.2.1.5	Zidovudine (AZT or ZDV)	Oral liquid	50mg/5mL	2
		Tablet	300mg	2
7.4.2.2 Non-nucleoside Reverse Transcriptase Inhibitors (NNRTI)				
7.4.2.2.1	Dapivirine	Vaginal ring	25mg	2
7.4.2.2.2	Etravirine (ETV)	Tablet	25mg	3
			100mg	3
			200mg	3
7.4.2.2.3	Nevirapine (NVP)	Oral liquid	10mg/mL	2
7.4.2.3 Protease Inhibitors (PI)				
7.4.2.3.1	Atazanavir + Ritonavir (ATV/r)	Tablet (heat-stable)	300mg + 100mg	2

146 Use only in treatment of viral encephalitis, viral meningitis, Herpes simplex and Herpes zoster infections.

147 Patient should avoid alcohol while on ABC.

148 Use only in patients of ≥15 years or ≥35kg.

#	Name of Medicine	Dose-form	Strength / Size	LOU
7.4.2.3.2	Darunavir (DRV) ¹⁴⁹	Tablet	75mg	3
			150mg	3
			600mg (f/c)	3
		Oral liquid	10mg/mL (200mL)	3
7.4.2.3.3	Darunavir + Ritonavir (DRV+r)	Tablet	600mg + 100mg	3
			800mg + 100mg	3
7.4.2.3.4	Lopinavir + ritonavir (LPV+r)	Tablet (heat-stable)	100mg + 25mg	2
			200mg + 50mg	2
		Granules (In Sachet) ¹⁵⁰	40mg +10mg	2
7.4.2.3.5	Ritonavir (RTV)	Tablet (heat-stable)	100mg	2
		Oral powder	100mg sachet [c]	2
7.4.2.4 Integrase Inhibitors (PI)				
7.4.2.4.1	Cabotegravir ¹⁵¹	Injection (Long acting), Single-dose vial	600mg/3mL	2
7.4.2.4.2	Dolutegravir (DTG) ¹⁵²	Tablet	50mg	2
			10mg	2
		Tablet (dispersible)	10mg	2
7.4.2.5 Fixed Dose Combinations (FDCs)				
7.4.2.5.1	Abacavir + lamivudine (ABC+3TC)	Tablet, (dispersible, scored)	120mg (as sulphate) + 60mg	2
		Tablet	600mg (as sulphate) + 300mg	2
7.4.2.5.2	Tenofovir disoproxil fumarate + Emtricitabine (TDF+FTC) ¹⁵³	Tablet	300mg + 200mg	2

149 Use in children > 3 years.

150 For children weighing between 3kg and 24.9kg and unable to swallow tablets

151 To be used for in-country implementation studies for pre-exposure prophylaxis for HIV.

152 Use in patients ≥25kg. Not recommended in women and adolescent girls of childbearing potential because of potential risk of neural tube defects.

153 Use for oral Pre-Exposure Prophylaxis (PrEP).

#	Name of Medicine	Dose-form	Strength / Size	LOU
7.4.2.5.3	Tenofovir disoproxil fumarate + Lamivudine (TDF+3TC)	Tablet	300mg + 300mg	2
7.4.2.5.4	Tenofovir Alafenamide + Lamivudine + Dolutegravir (TAF+3TC+DTG)	Tablet	25mg + 300mg + 50mg	2
7.4.2.5.5	Tenofovir disoproxil fumarate + Lamivudine + Dolutegravir (TDF+3TC+DTG) ¹⁵⁴	Tablet	300mg + 300mg + 50mg	2
7.4.2.5.6	Tenofovir disoproxil fumarate + Lamivudine + Efavirenz (TDF+3TC+EFV)	Tablet	300mg + 300mg + 400mg	2
7.4.2.5.7	Zidovudine + Lamivudine (AZT+3TC)	Tablet	300mg + 150mg	2
7.4.2.6 Medicines for prevention of HIV-related opportunistic infections				
7.4.2.6.1	Co-trimoxazole (Sulfamethoxazole + Trimethoprim) ¹⁵⁵	Oral liquid	240mg/5mL [c]	2
		Tablet	800 + 160mg	2
7.4.2.6.2	Dapsone ¹⁵⁶	Tablet	25mg	2
			100mg	2
7.4.3 Other Antivirals				
7.4.3.1	Gancyclovir ¹⁵⁷	PFI	500mg vial	5
7.4.3.2	Ribavirin	Injection (IV) ¹⁵⁸	800mg in 10mL phosphate buffer solution	4
		Capsule ¹⁵⁹	200mg	4
7.4.3.3	Valgancyclovir ¹⁶⁰	Tablet	450mg	5
		PFOL	50mg/mL	5

154 Use in patients ≥ 25 kg. Not recommended in women and adolescent girls of childbearing potential because of potential risk of neural tube defects.

155 RESTRICTED. Use only for Cotrimoxazole Preventive Therapy (CPT) in HIV+ patients. For lifelong use. Effective in preventing specific opportunistic infections (OIs) for HIV+ patients with low CD4 counts (Pneumocystis jirovecii pneumonia (PCP) and toxoplasmosis), as well as reducing the risk of common bacterial infections, sepsis, diarrhoeal illness, and malaria. Also used in treatment of Pneumocystis jirovecii pneumonia (PCP).

156 RESTRICTED. Use as an alternative to Co-trimoxazole for prophylaxis in HIV+ against Pneumocystis jirovecii pneumonia (PCP).

157 Also known as Gancyclovir. Use in management of Cytomegalovirus (CMV) retinitis.

158 Use in treatment of viral hemorrhagic fevers.

159 Use in treatment of viral hemorrhagic fevers and an add on therapy for patients with Hepatitis C and Liver Cirrhosis.

160 Also known as Valgancyclovir. Use in management of Cytomegalovirus (CMV) retinitis.

#	Name of Medicine	Dose-form	Strength / Size	LOU
7.4.4 Antihepatitis Medicines				
7.4.4.1 Medicines for Hepatitis B <i>Medicines for Hepatitis B treatment should only be used under close supervision of a specialist.</i>				
7.4.4.1.1 Nucleoside/Nucleotide reverse transcriptase inhibitors				
7.4.4.1.1.1	Entecavir ¹⁶¹	Oral liquid	0.05mg/mL	5
		Tablet	0.5mg	4
7.4.4.1.1.2	Lamivudine (3TC)	Tablet	150mg	4
		Oral liquid	50mg/5mL	5
7.4.4.1.1.3	Tenofovir Alafenamide (TAF)	Tablet	25mg	4
7.4.4.1.1.4	Tenofovir disoproxil fumarate (TDF) ¹⁶²	Tablet	300mg	4
7.4.4.2 Medicines for Hepatitis C				
7.4.4.2.1 non-pangenotypic direct-acting antiviral combinations				
7.4.4.2.1.1	Ledipasvir + Sofosbuvir	Tablet	90mg + 400mg	5
7.4.4.2.2 Pangenotypic direct-acting antiviral combinations				
7.4.4.2.2.1	Sofosbuvir+Velpatasvir	Tablet	400mg + 100mg	5
7.5 Antiprotozoal medicines				
7.5.1 Antiamoebic and anti giardiasis medicines				
7.5.1.1	Diloxanide ¹⁶³	Tablet	500mg (as furoate)	2
7.5.1.2	Diloxanide furoate + Metronidazole ¹⁶⁴	Oral liquid	250mg + 200mg	2
		Tablet	500mg + 400mg	2
7.5.1.3	Metronidazole	Injection	500mg/100mL vial	3
		Oral liquid	200mg/5mL (as benzoate)	2
		Tablet	400mg (scored)	2

161 Use for age ≥12 years.

162 TDF equivalent to 245mg tenofovir disoproxil.

163 Use only in patients >25kg.

164 For management of extra-luminal amoebiasis.

#	Name of Medicine	Dose-form	Strength / Size	LOU
7.5.1.4	Tinidazole ¹⁶⁵	Tablet (f/c)	250mg	2
			500mg	2
7.5.2 Antileishmaniasis Medicines				
7.5.2.1	Amphotericin B ¹⁶⁶	Injection	(Liposomal) 50mg vial	4
7.5.2.2	Paromomycin ¹⁶⁷	Injection solution (IM)	375mg/mL (as sulphate) (2mL amp)	4
7.5.2.3	Sodium stibogluconate ¹⁶⁸	Injection	100mg/mL (100mL amp)	4
7.5.3 Antimalarial medicines				
7.5.3.1 For curative treatment <i>Medicines for the treatment of P. falciparum malaria cases should be used in combination according to treatment guidelines.</i>				
7.5.3.1.1	Artemether ¹⁶⁹	Injection (oily, IM)	80mg/mL in 1mL amp	2
7.5.3.1.2	Artemether+ lumefantrine (AL)	Tablet	20mg + 120mg ¹⁷⁰	1
		Tablet (dispersible) ¹⁷¹	20mg + 120mg [c]	1
7.5.3.1.3	Artesunate	Injection (IM/IV) ¹⁷²	30mg vial	2
			60mg vial	2
		Suppository	100mg	1
7.5.3.1.4	Artesunate + Pyronaridine tetraphosphate ¹⁷³	Tablet (f/c)	60mg + 180mg	2
		Granules for oral suspension	20mg + 60mg [c]	2

165 Useful for giardia (2g single dose); may also be used for other indications as a longer acting alternative to Metronidazole in treatment regimens where single daily doses may be used to improve adherence.

166 RESTRICTED. Use only for second-line treatment of visceral Leishmaniasis. Should be stored at 2–8 °C and should not be frozen. Protect from exposure to light.

167 Also called Aminosidine. Use only in combination with Sodium stibogluconate.

168 Use only in combination with Paromomycin.

169 Use in management of severe malaria. Being a monotherapy, it should not be used except in the stated circumstances.

170 Do not use in 1st trimester of pregnancy (use oral Quinine). Use for patients 25 to >35kg.

171 Use for patients 5 to <25kg. Not recommended in children < 5kg.

172 Always follow artesunate treatment (24 hours minimum) with a 3-day course of artemether + lumefantrine (once the patient can take oral medication). Co-packed with 0.5mL amp of sodium bicarbonate 5% (50mg/mL) and 2.5mL amp of sodium chloride 0.9% (9mg/mL) as diluents.

173 Use for treatment of uncomplicated malaria (Plasmodium falciparum and P. vivax) in adults and children weighing ≥ 5kg. Not for use in children of weight <5kg.

#	Name of Medicine	Dose-form	Strength / Size	LOU
7.5.3.1.5	Dihydroartemisinin + Piperaquine (DHA-PPQ) ¹⁷⁴	Tablet	20mg + 160mg	3
		Tablet (scored)	40mg + 320mg	3
7.5.3.1.6	Doxycycline ¹⁷⁵	Capsule	100mg (as HCl or hyclate)	2
7.5.3.1.7	Primaquine ¹⁷⁶	Tablet	7.5mg (as diphosphate)	3
			15mg (as diphosphate)	3
7.5.3.1.8	Quinine	Injection ¹⁷⁷	300mg/mL (as HCl) (2mL amp)	3
		Tablet (f/c) ¹⁷⁸	300mg (as sulphate or bisulphate)	2
7.5.3.2 For Prophylaxis				
7.5.3.2.1	Atovaquone + Proguanil ¹⁷⁹	Tablet (f/c)	62.5mg (as HCl) + 25mg	4
			250mg (as HCl) + 100mg	4
7.5.3.2.2	Doxycycline ¹⁸⁰	Capsule	100mg (as HCl)	2
7.5.3.2.3	Mefloquine ¹⁸¹	Tablet	250mg (as HCl)	4
7.5.3.2.4	Proguanil ¹⁸²	Tablet	100mg (as HCl)	2
7.5.3.2.5	Sulfadoxine + Pyrimethamine ¹⁸³	Tablet	500mg + 25mg	2

174 Second line treatment for confirmed uncomplicated *P. falciparum* malaria treatment failure with 1st line AL. Use only in patients >5kg.

175 Given in combination with oral quinine to complete a total of 7 days treatment.

176 Use to achieve radical cure of *P.vivax* and *P.ovale* infections, given for 14 days.

177 For use only in the management of severe malaria when first line Artesunate injection is not available. Should only be given as an IV Infusion and never as IV (bolus) injection.

178 For use only in the management of severe malaria once patient has stabilised on injectable Quinine. Should only be used in combination with Doxycycline.

179 Chemoprophylaxis for non-immune persons visiting a malaria prone area.

180 Chemoprophylaxis for non-immune persons visiting a malaria prone area. Use only in patients > 8 years.

181 Chemoprophylaxis for non-immune persons visiting a malaria prone area. Use only in patients > 5kg or age 3 months.

182 Use only for prophylaxis in patients with sickle-cell disease and tropical splenomegaly syndrome (TSS).

183 RESTRICTED. For use only as prophylaxis i.e., Intermittent preventive treatment of malaria in pregnancy (IPTp).

#	Name of Medicine	Dose-form	Strength / Size	LOU
7.5.4 Antipneumocystosis & Antitoxoplasmosis Medicines				
7.5.4.1	Cotrimoxazole (Sulfamethoxazole + Trimethoprim)	Injection	96mg/mL (5mL amp)	4
		Oral liquid	240mg/5mL [c]	4
		Tablet (scored)	800mg + 160mg	4
7.5.4.2	Pyrimethamine ¹⁸⁴	Tablet	25mg	4
7.5.4.3	Sulfadiazine ¹⁸⁵	Tablet	500mg	4
7.5.5 Antitrypanosomal medicines				
7.5.5.1 Human African Trypanosomiasis				
7.5.5.1.1 Medicines for the treatment of 1st stage Human African trypanosomiasis				
7.5.5.1.1.1	Pentamidine isethionate ¹⁸⁶	PFI	200mg (as isethionate) vial	4
7.5.5.1.1.2	Suramin sodium ¹⁸⁷	PFI	1g vial	4
7.5.5.1.2 Medicines for the treatment of 2nd stage Human African trypanosomiasis				
7.5.5.1.2.1	Eflornithine ¹⁸⁸	Injection	200mg (as HCl)/ mL in 100mL bottle	4
7.5.5.1.2.2	Melarsoprol	Injection	3.6% solution (180mg), 5mL amp	4
7.5.5.1.2.3	Nifurtimox ¹⁸⁹	Tablet	120mg	4
7.6 Medicines for ectoparasitic infections¹⁹⁰				
7.6.1	Ivermectin	Tablet (scored)	3mg	3
8. ANTIMIGRAINE MEDICINES				
8.1 For treatment of Acute Attack				
8.1.1	Acetylsalicylic acid (Aspirin)	Tablet	300mg	2

¹⁸⁴ Use in management of Toxoplasmosis as combination of Pyrimethamine + Sulfadiazine.

¹⁸⁵ Use in management of Toxoplasmosis as combination of Pyrimethamine + Sulfadiazine.

¹⁸⁶ To be used for the treatment of *Trypanosoma brucei gambiense* infection.

¹⁸⁷ To be used for the treatment of the initial phase of *Trypanosoma brucei rhodesiense* infection.

¹⁸⁸ Use treatment of *Trypanosoma brucei gambiense* infection.

¹⁸⁹ Use only in combination with Eflornithine for treatment of *Trypanosoma brucei gambiense* infection.

¹⁹⁰ Refer to the section DERMATOLOGICAL MEDICINES (Topical).

#	Name of Medicine	Dose-form	Strength / Size	LOU
8.1.2	Ibuprofen ¹⁹¹	Tablet	200mg [c]	2
8.1.3	Paracetamol	Tablet (scored)	500mg	1
		Oral liquid	120mg/5mL[c]	1
8.1.4	Sumatriptan ¹⁹²	Tablet	25mg	5
			50mg	5
8.2 Prophylaxis				
8.2.1	Propranolol ¹⁹³	Tablet	40mg (as HCl)	4
8.2.2	Topiramate ¹⁹⁴	Tablet	25mg	5
			50mg	5
9. IMMUNOMODULATORS AND ANTINEOPLASTICS				
9.1 Immunomodulators for non-malignant disease and supportive medicines				
9.1.1	Antithymocyte globulin (ATG) (Equine) ¹⁹⁵	Injection	50mg/mL, 5mL vial	6
9.1.2	Azathioprine	Tablet (scored)	50mg	5
9.1.3	Basiliximab ¹⁹⁶	PFI	20mg	6
9.1.4	Cyclosporin ¹⁹⁷	Capsule	25mg	6
			100mg	6
		Concentrate for injection ¹⁹⁸	50mg/mL in 1mL amp	6
9.1.5	Cyclophosphamide ¹⁹⁹	PFI	500mg vial	5
			1g vial	5

191 Do not use in children < 3 months old.

192 For acute management of migraine

193 RESTRICTED. Use only for Prophylaxis of Migraine (i.e., do NOT use as an alternative antihypertensive).

194 For prophylaxis management in adult patients who have a contraindication for Propranolol.

195 Use for premedication prior to transplants to prevent organ rejection (lymphocyte depleting). May also be used in treatment of organ rejection.

196 Use for premedication prior to transplants to prevent organ rejection (non-lymphocyte depleting).

197 Also known as Ciclosporin.

198 Use in organ transplantation.

199 Immunosuppressant. Use in treatment of severe lupus, rheumatoid arthritis (RA), inflammatory muscle disease.

#	Name of Medicine	Dose-form	Strength / Size	LOU
9.1.6	Everolimus ²⁰⁰	Tablet	500 micrograms (or 0.5mg)	5
9.1.7	Methylprednisolone	PFI	125mg (as sodium succinate)	4
			500mg (as sodium succinate)	4
9.1.8	Mycophenolic acid ²⁰¹	Tablet (e/c)	180mg (as mycophenolate sodium)	6
			360mg (as mycophenolate sodium)	6
9.1.9	Mycophenolate mofetil ²⁰²	Tablet	250mg	6
			500mg	6
9.1.10	Prednisolone	Tablet	5mg	5
			20mg	5
9.1.11	Rituximab ²⁰³	Injection (IV)	10mg/mL (10mL vial)	6
			10mg/mL (50mL vial)	6
9.1.12	Tacrolimus	Concentrate (for IV infusion)	5mg/1mL amp	6
		Capsule	500 micrograms	6
			1mg	6
			5mg	6
9.2 Antineoplastic and supportive medicines				
9.2.1 Cytotoxic medicines				
9.2.1.1	Arsenic trioxide ²⁰⁴	Concentrate solution for Infusion	1mg/mL	6
9.2.1.2	Bendamustine ²⁰⁵	Injection	100mg vial	5

200 Use for maintenance immunosuppression following transplantation.

201 Mycophenolic acid is the active ingredient of Mycophenolate mofetil.

202 Use for prophylaxis of organ rejection in patients receiving kidney, heart or liver transplants. Should be used concomitantly with cyclosporine and corticosteroids. Newer medicine with less side effects compared to Mycophenolate sodium.

203 Use for desensitization and treatment of antibody mediated rejection, management of juvenile idiopathic arthritis and RA, systemic vasculitis, inflammatory muscle disease.

204 Use in combination with All-trans retinoid acid (ATRA) for management of acute promyelocytic leukaemia.

205 Use in treatment of chronic lymphocytic leukaemia (CLL)/small lymphocytic lymphoma (SLL), diffuse large B cell lymphoma (DLBCL), follicular lymphoma.

#	Name of Medicine	Dose-form	Strength / Size	LOU
9.2.1.3	Bleomycin ²⁰⁶	PFI	15mg vial (as sulphate)	5
9.2.1.4	Cabazitaxel ²⁰⁷	Injection	60mg	5
9.2.1.5	Calcium folinate ²⁰⁸	Injection	10mg/mL (5mL vial)	5
		Injection	10mg/mL (30mL vial)	5
		Tablet	15mg	5
9.2.1.6	Capecitabine ²⁰⁹	Tablet	150mg	5
			500mg	5
9.2.1.7	Carboplatin ²¹⁰	Injection	10mg/mL (15mL vial)	5
			10mg/mL (45mL vial)	5
9.2.1.8	Chlorambucil ²¹¹	Tablet	2mg	5
9.2.1.9	Cisplatin ²¹²	Injection	1mg/mL (50mL vial)	5
9.2.1.10	Cyclophosphamide ²¹³	PFI	500mg vial	5
			1g vial	5
		Tablet	50mg	5
9.2.1.11	Cytarabine ²¹⁴	PFI	100mg vial	5
			1g vial	5
9.2.1.12	Dacarbazine ²¹⁵	PFI	200mg vial (as citrate)	5

206 Use in Hodgkin lymphoma, Kaposi sarcoma, ovarian and testicular germ cell tumour.

207 2nd line chemotherapy for Prostate Cancer.

208 Use in early-stage colon & rectal cancers, gestational trophoblastic neoplasia, metastatic colorectal cancer, osteosarcoma, Burkitt lymphoma; also, in chemotherapy protocol for acute lymphocytic leukaemia (ALL).

209 Use in treatment of early-stage colon & rectal cancers, metastatic breast & colorectal cancers.

210 Use in treatment of early-stage breast cancer; epithelial ovarian cancer; nasopharyngeal cancer; non-small cell lung cancer; osteosarcoma; retinoblastoma; cervical cancer.

211 Use in chronic lymphocytic leukaemia.

212 Use in treatment of cervical cancer; head and neck cancer (as a radio-sensitizer); nasopharyngeal cancer (as a radio-sensitizer); non-small cell lung cancer; osteosarcoma; ovarian and testicular germ cell tumours.

213 Use in treatment of chronic lymphocytic leukaemia, diffuse large B-cell lymphoma, early-stage breast cancer, gestational trophoblastic neoplasia, Hodgkin & follicular lymphomas, rhabdomyosarcoma, Ewing sarcoma, acute lymphoblastic leukaemia, Burkitt lymphoma, metastatic breast cancer.

214 Use in treatment of acute myeloid leukaemia; acute lymphoblastic leukaemia; acute promyelocytic leukaemia; Burkitt lymphoma.

215 Use in treatment of Hodgkin lymphoma, Melanoma.

#	Name of Medicine	Dose-form	Strength / Size	LOU
9.2.1.13	Dactinomycin (Actinomycin D) ²¹⁶	PFI	500 micrograms vial	5
9.2.1.14	Daunorubicin ²¹⁷	PFI	20mg vial (as HCl)	5
			50mg vial (as HCl)	5
9.2.1.15	Docetaxel ²¹⁸	Injection (premixed)	120mg vial	5
			80mg vial	5
9.2.1.16	Doxorubicin	PFI or Solution for Injection ²¹⁹	50mg vial (as HCl)	5
9.2.1.17	Etoposide ²²⁰	Capsule	50mg	5
			100mg	5
		Injection	20mg/mL (5mL vial)	5
9.2.1.18	Fluorouracil ²²¹	Injection	50mg/mL (5mL vial)	5
9.2.1.19	Gemcitabine ²²²	PFI	200mg vial	5
			1g vial	5
9.2.1.20	Hydroxycarbamide (Hydroxyurea) ²²³	SODF	500mg	5
9.2.1.21	Ifosfamide + Mesna ²²⁴	Injection	1g + 600mg	5
			2g + 1200mg	5

216 Use in treatment of gestational trophoblastic neoplasia; rhabdomyosarcoma; nephroblastoma (Wilms tumour).

217 Use in treatment of acute lymphoblastic leukaemia; acute myeloid leukaemia; acute promyelocytic leukaemia.

218 Use in treatment of early stage & metastatic breast cancers, metastatic prostate cancer.

219 The solution for injection is preferred and requires cold chain storage.

220 Use in treatment of testicular germ cell tumour, gestational trophoblastic neoplasia, Hodgkin and Burkitt lymphomas, non-small cell lung cancer, ovarian germ cell tumour, retinoblastoma, Ewing sarcoma, acute lymphoblastic leukaemia.

221 Use in treatment of HER2 negative breast cancer, adenocarcinoma, squamous cell carcinoma, metastatic colon & rectal cancers, pancreatic and anal cancer, Nasopharyngeal Head and Neck Cancer

222 Use in treatment of epithelial ovarian cancer, non-small cell lung cancer, Breast cancer, Bladder cancer, Nasopharyngeal Head and Neck Cancer.

223 Use in treatment of chronic myeloid leukaemia.

224 Use in treatment of relapsed/refractory Hodgkins Lymphoma, Bladder cancer, sarcomas

#	Name of Medicine	Dose-form	Strength / Size	LOU
9.2.1.22	Irinotecan ²²⁵	Injection	20mg/mL (2mL vial)	5
			20mg/mL (5mL vial)	5
9.2.1.23	L - Asparaginase ²²⁶	PFI	10,000 IU vial	5
9.2.1.24	Liposomal Doxorubicin (Pegylated) ²²⁷	Solution for Injection	20mg vial	5
			50mg vial	5
9.2.1.25	Melphalan	Tablet ²²⁸	2mg	5
		PFI ²²⁹	50mg vial	5
9.2.1.26	Mercaptopurine ²³⁰	Tablet	50mg	5
9.2.1.27	Methotrexate ²³¹	PFI (preservative-free)	25mg (as sodium salt)/mL (2mL vial)	5
		PFI (preservative-free)	25mg (as sodium salt)/mL (20mL vial) ²³²	5
		Tablet	2.5mg (as sodium salt)	5
			10mg	5
9.2.1.28	Mitomycin C ²³³	Injection	10mg	5
9.2.1.29	Oxaliplatin ²³⁴	Solution for Injection	2mg/mL (25mL vial)	5
			2mg/mL (50mL vial)	5

225 Use in treatment of acute metastatic colon and rectal cancer, glioblastoma, pancreatic cancer, metastatic anal cancer, rhabdomyosarcoma.

226 Use in treatment of acute lymphoblastic leukaemia (ALL) in patients who have developed hypersensitivity to E.coli derived asparaginase. Type required is that produced by Erwinia chrysathemi (also known as Crisantaspase). Anaphylaxis treatment must be available.

227 Use in treatment of Kaposi's sarcoma, relapsed/refractory Hodgkin's lymphoma.

228 Use in treatment of multiple myeloma, relapsed/refractory Hodgkin's lymphoma.

229 Use in treatment of multiple myeloma, relapsed/refractory Hodgkin's lymphoma. Also, for intraocular administration for retinoblastoma

230 Use in treatment of acute lymphoblastic leukaemia, acute lymphocytic leukaemia, acute promyelocytic leukaemia.

231 Use in treatment of advanced breast cancer, gestational trophoblastic neoplasia, osteosarcoma, acute lymphoblastic and promyelocytic leukaemia, Head and Neck cancers.

232 Providing a total of 500mg per 20mL vial.

233 Use in bladder cancer, anal cancer.

234 Use in treatment of early-stage colon cancer, metastatic colorectal cancer, Small Bowel cancer, Stomach cancer.

#	Name of Medicine	Dose-form	Strength / Size	LOU
9.2.1.30	Paclitaxel ²³⁵	Concentrate (for IV infusion)	6mg/mL (5mL vial)	5
			6mg/mL (16.7mL vial)	5
			6mg/mL (50mL vial)	5
9.2.1.31	Pegaspargase ²³⁶	Injection	3750 Units/5mL vial	5
9.2.1.32	Pemetrexed	PFI or solution for injection	500mg	5
9.2.1.33	Procarbazine ²³⁷	Capsule	50mg (as HCl)	5
9.2.1.34	Temozolomide ²³⁸	Capsule	100mg	5
			20mg	5
9.2.1.35	Tioguanine ²³⁹	SODF	40mg [c]	5
9.2.1.36	Topotecan ²⁴⁰	Injection	2.5mg	5
9.2.1.37	Vinblastine ²⁴¹	Injection	1mg/mL (as sulphate) (10mL vial)	5
9.2.1.38	Vincristine ²⁴²	PFI or solution for injection	1mg/mL (as sulphate) vial	5
9.2.1.39	Vinorelbine ²⁴³	Injection	10mg/mL (1mL vial)	5
			10mg/mL (5mL vial)	5

235 Use in treatment of epithelial ovarian cancer, early stage & metastatic breast cancers, Kaposi sarcoma, head and neck cancer, non- small cell lung cancer, ovarian germ cell tumour, Oesophagus Requires special (non-PVC) tubing (infusion set) since it absorbs through plastic

236 Use in first line treatment of acute lymphoblastic leukaemia (ALL) or in patients with hypersensitivity to native forms of L- asparaginase. Dose modifications required if infusion reactions or hypersensitivity reactions occur, in thrombosis, pancreatitis, haemorrhage and hepatotoxicity. Should be administered in healthcare settings with appropriate medical support and resuscitation equipment to manage hypersensitivity reactions should they occur. May be administered IM (volume at single injection site limited to 2mL) OR IV diluted in 100mL of 0.9% sodium chloride or 5% Dextrose and administered immediately over 1 to 2 hours; Premedication with paracetamol, H-1 and H-2 receptor blockers is required. Patients should be observed for at least 1 hour following administration.

237 Use in treatment of Hodgkin lymphoma, Brain Tumours.

238 Use in Brain Tumours, Melanoma.

239 Use in treatment of acute myeloid leukaemia (AML), acute lymphocytic leukaemia (ALL) and in Metronomic chemotherapy.

240 Use in treatment of Small Cell Lung Cancer (SCLC) sensitive disease after failure of first-line chemotherapy; combination therapy with Cisplatin for stage IV-B, recurrent or persistent cervical cancer which cannot be treated with surgery and/or radiation therapy; metastatic ovarian cancer after failure of initial or subsequent chemotherapy.

241 Use in treatment of Hodgkin lymphoma, Kaposi sarcoma, testicular & ovarian germ cell tumours.

242 Use in treatment of diffuse large B-cell lymphoma; gestational trophoblastic neoplasia; Hodgkin lymphoma; Kaposi sarcoma; follicular lymphoma; retinoblastoma; rhabdomyosarcoma; Ewing sarcoma; acute lymphoblastic leukaemia; nephroblastoma (Wilms tumour); Burkitt lymphoma,

243 Use in treatment of non-small cell lung cancer, metastatic breast cancer.

#	Name of Medicine	Dose-form	Strength / Size	LOU
9.2.2 Targeted therapies				
9.2.2.1	All-trans retinoid acid (ATRA) ²⁴⁴	Capsule	10mg	5
9.2.2.2	Bevacizumab ²⁴⁵	Injection	100mg	5
			400mg	5
9.2.2.3	Bortezomib ²⁴⁶	PFI	3,5mg vial	5
9.2.2.4	Gefitinib ²⁴⁷	Tablet	250mg	5
9.2.2.5	Ibrutinib ²⁴⁸	Capsule	140mg	5
9.2.2.6	Imatinib ²⁴⁹	Tablet	400mg (as mesylate)	5
9.2.2.7	Nilotinib ²⁵⁰	Capsule	200mg	5
9.2.2.8	Osimertinib ²⁵¹	Tablet	80mg	5
9.2.2.9	Palbociclib ²⁵²	Tablet	125mg	5
			100mg	5
			75mg	5
9.2.2.10	Pazopanib ²⁵³	Tablet	200mg	5
			400mg	5
9.2.2.11	Rituximab ²⁵⁴	Injection (IV)	10mg/mL (10mL vial)	5
			10mg/mL (50mL vial)	5

244 Use in treatment of acute promyelocytic leukaemia.

245 Use in Colorectal cancer, cervical cancer, glioblastoma, Renal Cell Carcinoma, Hepatocellular carcinoma.

246 Use in treatment of multiple myeloma.

247 Use for EGFR mutation-positive advanced non-small cell lung cancer, first line.

248 Use for Chronic Lymphocytic Leukaemia.

249 Use in treatment of chronic myeloid leukaemia, gastrointestinal stromal tumour, Sarcoma.

250 Use in treatment of Imatinib-resistant chronic myeloid leukaemia.

251 Use in epidermal growth factor receptor (EGFR) mutated Lung cancer as second line therapy.

252 Use in hormone positive metastatic breast cancer.

253 Use in sarcoma, Renal Cell Carcinoma.

254 Use in treatment of diffuse large B-cell and follicular lymphomas, chronic lymphocytic leukaemia.

#	Name of Medicine	Dose-form	Strength / Size	LOU
9.2.2.12	Sorafenib ²⁵⁵	Capsule	200mg	5
9.2.2.13	Trastuzumab	PFI ²⁵⁶	150mg vial	5
			440mg vial + diluent	5
		Injection (Solution for subcutaneous injection) ²⁵⁷	600mg	5
9.2.3 Immunomodulators				
9.2.3.1	Filgrastim ²⁵⁸	Injection (prefilled syringe)	120 micrograms/0.2mL	5
			300 micrograms/0.5mL	5
9.2.3.2	Lenalidomide ²⁵⁹	Capsule	10mg	5
			25mg	5
9.2.3.3	Peg-Filgrastim ²⁶⁰	Injection (prefilled syringe)	6mg/0.6mL	5
9.2.3.4	Pembrolizumab ²⁶¹	Injection	100mg/4mL	5
9.2.3.5	Thalidomide ²⁶²	Capsule	100mg	5
9.2.4 Hormones and antihormones				
9.2.4.1	Abiraterone ²⁶³	Tablet	250mg	5
9.2.4.2	Anastrozole ²⁶⁴	Tablet	1mg	5

255 Use in HCC, Thyroid cancer.

256 Use in treatment of early stage & metastatic HER2-positive breast cancer, stomach cancer, colorectal cancer.

257 Use in treatment of early stage & metastatic HER2-positive breast cancer.

258 Use as primary prophylaxis in those at high risk for developing febrile neutropenia associated with myelotoxic chemotherapy; use as secondary prophylaxis for patients who have experienced neutropenia following prior myelotoxic chemotherapy; to facilitate administration of dose dense chemotherapy regimens.

259 Use in combination with Dexamethasone for treatment of multiple myeloma (MM)

260 For prevention of chemotherapy induced neutropenia; Should not be administered between 14 days before chemotherapy and 24hours after chemotherapy.

261 Use in treatment of unresectable or metastatic melanoma, non-small cell lung cancer, head & neck squamous cell carcinoma, classical Hodgkin lymphoma, metastatic small cell lung cancer, microsatellite instability-high cancer, gastric and cervical cancers, primary mediastinal large B-cell lymphoma, hepatocellular and Merkel cell carcinomas, urothelial and renal cell carcinomas, oesophageal and endometrial cancers; Nivolumab may be used as an alternative.

262 Use (with Melphalan & Prednisolone) in management of multiple myeloma.

263 Use in treatment of high risk localised prostate cancer, metastatic hormone sensitive, castration-resistant prostate cancer.

264 Use in treatment of early-stage breast cancer, metastatic breast cancer. Letrozole Tablets 2.5mg may be available and used as a much cheaper alternative.

#	Name of Medicine	Dose-form	Strength / Size	LOU
9.2.4.3	Bicalutamide ²⁶⁵	Tablet	50mg	5
9.2.4.4	Dexamethasone ²⁶⁶	Injection	4mg/1mL amp (as sodium phosphate)	5
		Tablet (scored)	4mg	5
9.2.4.5	Goserelin ²⁶⁷	Implant (in syringe applicator)	3.6mg (as acetate)	5
			10.8mg (as acetate)	5
9.2.4.6	Hydrocortisone ²⁶⁸	PFI	100mg vial (as sodium succinate)	5
9.2.4.7	Letrozole ²⁶⁹	Tablet	2.5mg	5
9.2.4.8	Methylprednisolone ²⁷⁰	PFI	500mg (as sodium succinate) [c]	5
9.2.4.9	Octreotide ²⁷¹	Injection kit	20mg	5
9.2.4.10	Prednisolone ²⁷²	Oral liquid	15mg/5 mL [c]	5
		Tablet	5mg	5
			20mg	5
9.2.4.11	Tamoxifen ²⁷³	Tablet	20mg (as citrate)	5
9.2.5 Supportive medicines				
9.2.5.1	Allopurinol ²⁷⁴	Tablet	100mg	5
			300mg	5
9.2.5.2	Febuxostat ²⁷⁵	Tablet	40mg	4

265 Use in treatment of localised and metastatic prostate cancer.

266 Use in treatment of acute lymphoblastic leukaemia, multiple myeloma.

267 Use in treatment of breast and prostate cancer.

268 Use in treatment of acute lymphoblastic leukaemia.

269 Used in adjuvant breast cancer and metastatic disease.

270 Use in treatment of acute lymphoblastic leukaemia, immune thrombocytopenic purpura.

271 Used in carcinoid tumours.

272 Use in treatment of chronic lymphocytic leukaemia; diffuse large B-cell lymphoma; Hodgkin lymphoma; follicular lymphoma; acute lymphoblastic leukaemia; Burkitt lymphoma; metastatic castration-resistant prostate cancer; multiple myeloma.

273 Use in treatment of early stage & metastatic breast cancers.

274 Use in management of Tumour lysis syndrome.

275 Use in patients with hypersensitivity to Allopurinol, or not achieving uric acid target with Allopurinol. Avoid in patients at risk of heart disease/ with cardiac conditions; Prophylaxis for tumour lysis syndrome.

#	Name of Medicine	Dose-form	Strength / Size	LOU
9.2.5.3	Magnesium Sulphate ²⁷⁶	Injection	4% (100mL vial)	5
9.2.5.4	Mannitol ²⁷⁷	Solution for Infusion	20%, 500mL	5
9.2.5.5	Mesna ²⁷⁸	Injection	100mg/mL (2mL amp)	5
			100mg/mL (4mL amp)	5
9.2.5.6	Rasburicase ²⁷⁹	Injection	7.5mg/vial	5
9.2.5.7	Sodium hydrogen carbonate (Sodium bicarbonate) ²⁸⁰	Injectable solution	8.4% (10mL amp)	5
9.2.5.8	Zoledronic acid ²⁸¹	Concentrate solution for Infusion	800 micrograms/mL (in 5mL vial)	5
10. ANTIPARKINSONISM MEDICINES				
10.1	Benzhexol	Tablet	5mg (as HCl)	2
10.2	Biperiden ²⁸²	Injection	5mg (lactate) in 1mL amp	4
		Tablet	2mg (hydrochloride).	4
10.3	Levodopa + Carbidopa	Tablet	100mg + 10mg	4
			250mg + 25mg	4
10.4	Pramipexole	Tablet (scored)	180 micrograms base	4
			700 micrograms base	4
11. MEDICINES for ALZHEIMER'S disease and DEMENTIA				
11.1	Donepezil ²⁸³	Tablet	5mg	4
			10mg	4

276 Uro-protection and magnesium replacement for patients on cisplatin.

277 Premedication for high dose Cisplatin.

278 Use in prevention of haemorrhagic cystitis when high dose Cyclophosphamide or ifosfamide is administered.

279 Use in management of tumour lysis syndrome.

280 For alkalisation of urine when administered with high dose methotrexate injection.

281 Use in treatment of malignancy-related bone disease. Provides 4mg per 5mL vial, prevention of osteopenia with aromatase inhibitors.

282 Used for the symptomatic management of parkinsonism. The oral formulation is usually the hydrochloride salt while the injectable is the lactate salt.

283 Use in management of mild to moderate dementia due to Alzheimer's disease.

#	Name of Medicine	Dose-form	Strength / Size	LOU
11.2	Memantine ²⁸⁴	Tablet	5mg	4
11.3	Rivastigmine ²⁸⁵	Capsule	1.5mg	5
12. MEDICINES affecting the BLOOD				
12.1 Antianaemics				
12.1.1	Darbepoetin alfa ²⁸⁶	Injection	25 micrograms for subcutaneous injection	5
			40 micrograms for subcutaneous injection	5
12.1.2	Erythropoetin (alfa or beta) stimulating agents	Injection (prefilled syringe)	2,000 IU	4
12.1.3	Ferrous salt	Oral liquid (drops)	25mg (iron as sulphate)/ mL	2
		Tablet (f/c)	60-65mg elemental iron	2
12.1.4	Ferrous salt + Folic acid ²⁸⁷	Tablet	60-65mg elemental iron + 400mcg	2
12.1.5	Folic acid	Tablet	400 micrograms ²⁸⁸	1
			5mg ²⁸⁹	1
12.1.6	Hydroxocobalamin (Vit B12)	Injection	1mg/1mL amp (as HCl, acetate or sulphate)	4
12.1.7	Iron sucrose ²⁹⁰	Injection	100mg	4
12.2 Medicines affecting coagulation				
12.2.1 Coagulant medicines				
12.2.1.1	Phytomenadione (Vit K1)	Injection	10mg/mL (0.2mL) amp [c] ²⁹¹	2
			10mg/mL (1mL amp)	4

284 Use in management of moderate dementia due to Alzheimer's disease when acetylcholinesterase inhibitors are contra-indicated or are not tolerated. Medicine of choice in treatment of severe dementia.

285 Used for Symptomatic treatment of mild to moderate severe dementia in patients with idiopathic Parkinson's disease.

286 For treating anaemia in patients with cancer undergoing chemotherapy as well as patients with chronic CKD undergoing dialysis.

287 Nutritional supplement for use during pregnancy.

288 Use periconceptually for prevention of first occurrence of neural tube defects.

289 Supplementation in patients with sickle cell anaemia.

290 Use in dialysis patients where oral absorption of Iron is poor and to correct iron deficiency anaemia.

291 Use for all Newborns.

#	Name of Medicine	Dose-form	Strength / Size	LOU
12.2.1.2	Tranexamic acid	Injection	100mg/mL (5mL amp)	2
		Tablet	500mg	4
12.2.2 Anticoagulant medicines				
12.2.2.1	Enoxaparin	Injection (prefilled and calibrated syringe)	40mg/0.4mL	4
			80mg/0.8mL	4
12.2.2.2	Heparin sodium	Injection	5,000 IU/mL (5mL vial)	4
12.2.2.3	Rivaroxaban ²⁹²	Tablet	10mg	5
			15mg	5
			20mg	5
12.2.2.4	Warfarin ²⁹³	Tablet (scored)	1mg (as sodium salt)	4
			3mg (as sodium salt)	4
			5mg (as sodium salt)	4
12.3 Other medicines for haemoglobinopathies				
12.3.1	Deferasirox ²⁹⁴	Tablet	100mg	4
			400mg	4
12.3.2	Deferoxamine mesilate ²⁹⁵	PFI	500mg vial	4
12.3.3	Hydroxycarbamide (Hydroxyurea)	Capsule	250mg	4
			500mg	4
		Oral Solution ²⁹⁶	100mg/45mL	4

292 Use for patients with atrial fibrillation and pulmonary embolism. Not for use in pregnancy and patients with prosthetic mitral valves. Also used for prevention of venous thromboembolism (VTE) in adult patients undergoing elective hip or knee replacement. Patients should be observed carefully for signs of bleeding.

293 Unexpected bleeding at therapeutic levels should always be investigated and INR monitored.

294 Use to reduce chronic iron overload in patients receiving long-term blood transfusions for conditions such as beta-thalassemia and other chronic anaemias.

295 Deferasirox oral form may be an alternative, depending on cost and availability.

296 Paediatric strength not commercially available. For extemporaneous preparation using Hydroxyurea powder.

#	Name of Medicine	Dose-form	Strength / Size	LOU
13. BLOOD PRODUCTS of HUMAN ORIGIN and PLASMA SUBSTITUTES				
13.1 Blood and Blood Components				
13.1.1	Cryoprecipitate ²⁹⁷			5
13.1.2	Plasma, fresh-frozen			4
13.1.3	Platelets			4
13.1.4	Red blood cells			4
13.1.5	Whole blood			4
13.2 Plasma-derived Medicines				
13.2.1 Human immunoglobulins				
13.2.1.1	Anti-D immunoglobulin ²⁹⁸	PFI + diluent	750 IU/mL (2mL vial)	4
13.2.1.2	Anti-Hepatitis B immunoglobulin (HBIG) ²⁹⁹	Injection	100 IU/mL	4
13.2.1.3	Anti-Rabies immunoglobulin ³⁰⁰	Injection	200 IU/mL (5mL vial)	2
13.2.1.4	Ant-Tetanus immunoglobulin ³⁰¹	Injection	1500 IU vial	4
13.2.1.5	Normal immunoglobulin ³⁰²	Injection (IV)	5% protein solution (100mL vial)	5
			10% protein solution (100mL vial)	5
13.2.2 Blood Coagulation Factors				
13.2.2.1	Coagulation factor VIII	PFI (Extended half-life)	250 IU vial	4
			500 IU vial	4
			1,000 IU vial	4
			2,000 IU vial	4

297 It is stored as frozen packs until needed.

298 Rho (human monoclonal). Contains 1,500IU = 300 micrograms per 2mL vial when reconstituted

299 Used for prevention of hepatitis B in case of exposure in non-immunized subjects e.g., sexual assault survivors and children born to Hepatitis B positive mothers; administer preferably within 24 - 72 hours.

300 Ig (Equine)

301 Ig (Human)

302 Normal Ig. Use for primary immune deficiency and Kawasaki disease.

#	Name of Medicine	Dose-form	Strength / Size	LOU
13.2.2.2	Coagulation factor IX	PFI (Extended half-life)	250 IU/vial	4
			500 IU/vial	4
			1,000 IU/vial	4
13.3 Plasma substitutes				
13.3.1	Dextran- 70 ³⁰³	Solution	6%	4
13.3.2	Gelatin-based colloid ³⁰⁴	Solution for Infusion	4%	4
13.3.3	Hydroxyethyl starch ³⁰⁵	Solution for Infusion	6%	4
13.3.4	Human albumin infusion ³⁰⁶	Solution	5%	4
			20%	4
13.3.5	Polygeline ³⁰⁷	Infusion (IV)	3.5% (500mL pack)	4
14. CARDIOVASCULAR MEDICINES				
14.1 Antianginal Medicines				
14.1.1	Bisoprolol	Tablet	2.5mg	4
			5mg	4
14.1.2	Carvedilol	Tablet	3.125mg	4
			6.25mg	4
			12.5mg	4
			25mg	4
14.1.3	Glyceryl trinitrate	Tablet (sublingual)	500 micrograms	4
		Spray (sublingual)	400micrograms/ dose	4
14.1.4	Isosorbide dinitrate	Tablet	20mg	4
		Tablet (Sublingual)	5mg	4

303 Plasma expander. Polygeline 3.5% is an alternative.

304 Plasma expander. Use as alternative in patients with renal insufficiency and intolerance to starch plasma expanders.

305 Plasma expander.

306 Required for protein supplementation for patients with burn and other chronic wounds.

307 Partially degraded gelatin plasma expander. Dextran-70 is an alternative.

#	Name of Medicine	Dose-form	Strength / Size	LOU
14.1.5	Trimetazidine	Tablet (m/r)	35mg	4
14.2 Antiarrhythmic medicines				
14.2.1	Adenosine ³⁰⁸	Injection	6mg/2mL	6
14.2.2	Amiodarone	Injection ³⁰⁹	50mg (as HCl)/mL in 3mL amp	5
		Tablet ³¹⁰	100mg (as HCl)	4
			200mg (as HCl)	4
14.2.3	Atropine	Injection	1mg (as sulphate)/1mL amp	4
14.2.4	Bisoprolol	Tablet	2.5mg	4
			5mg	4
14.2.5	Carvedilol	Tablet	3.125mg	4
			6.25mg	4
			12.5mg	4
			25mg	4
14.2.6	Digoxin	Oral liquid ³¹¹	50 micrograms/mL	4
		Tablet	250 micrograms	4
			125 micrograms	4
14.2.7	Epinephrine (adrenaline) ³¹²	Injection	1mg/1mL amp	4
14.2.8	Lignocaine (Preservative free) ³¹³	Injection	200mg/10mL	5
14.2.9	Verapamil	Tablet (Immediate release)	40mg (as HCl)	4
		Tablet (Modified release)	120mg	4

308 Use in management of supraventricular tachycardia in Critical care units.

309 Only for IV use in ICU/Critical care units. Reserved for use in exceptional cases when other therapy for Arrhythmias associated with structural and congenital heart disease has failed.

310 Tablet form enables conversion from IV to oral administration.

311 Measure doses with the graduated pipette provided.

312 To be diluted from the available formulation before use as antiarrhythmic. Usual dilution is 1 to 10 parts to get a concentration of 1:10000.

313 For specialist use only.

#	Name of Medicine	Dose-form	Strength / Size	LOU
14.3 Antihypertensive medicines				
14.3.1 Angiotensin converting enzyme Inhibitors (ACEIs)				
14.3.1.1	Enalapril	Tablet (scored)	5mg (as hydrogen maleate)	3
			10mg (as hydrogen maleate)	3
			20mg (as hydrogen maleate)	3
14.3.2 Angiotensin Receptor Blockers (ARBs)				
14.3.2.1	Losartan	Tablet (f/c)	50mg	3
14.3.2.2	Telmisartan	Tablet	40mg	4
			80mg	4
14.3.3 Beta Blockers (BBs)				
14.3.3.1	Bisoprolol	Tablet	2.5mg	4
			5mg	4
14.3.3.2	Labetalol	Injection ³¹⁴	5mg/mL (20mL amp)	4
		Tablet ³¹⁵	100mg	3
			200mg	3
14.3.3.3	Metoprolol	Tablet(e/r)	25mg	3
			50mg	3
14.3.3.4	Nebivolol	Tablet	2.5mg	3
			5mg	3
14.3.4 Calcium channel Blockers (CCBs)				
14.3.4.1	Amlodipine	Tablet	5mg	3
			10mg	3

314 For use in Critical Care units for hypertensive emergencies and for management of hypertension in pregnancy.

315 Use for management of Hypertension in pregnancy.

#	Name of Medicine	Dose-form	Strength / Size	LOU
14.3.4.2	Nifedipine ³¹⁶	Tablet (s/r)	20mg	3
14.3.5 Thiazide & Thiazide-like Diuretics				
14.3.5.1	Chlorthalidone	Tablet	12.5mg	4
14.3.5.2	Hydrochlorothiazide (HCTZ)	Tablet (scored)	25mg	3
14.3.5.3	Indapamide	Tablet	1.5mg	4
14.3.6 Other anti-hypertensive agents				
14.3.6.1 Centrally acting antihypertensive agents				
14.3.6.1.1	Methyldopa ³¹⁷	Tablet	250mg	4
			500mg	4
14.3.6.2 Potassium sparing Diuretics				
14.3.6.2.1	Spirolactone ³¹⁸	Tablet (scored)	25mg	4
14.3.6.3 Vasodilators				
14.3.6.3.1	Hydralazine	Injection ³¹⁹	20mg (as HCl)	4
		Tablet	25mg (as HCl)	3
			50mg (as HCl)	3
14.3.6.4 Alpha 1 Receptor Blockers				
14.3.6.4.1	Doxazosin ³²⁰	Tablet	2mg	4
14.3.6.4.2	Prazosin ³²¹	Capsule	500 micrograms	4
			1mg	4
			5mg	4

316 Use for management of Hypertension in pregnancy.

317 RESTRICTED. For use only for Hypertension in Pregnancy and resistant Hypertension

318 Use in patients needing enhanced diuretic effect. spironolactone in the context of hypertension and heart failure is a mineralocorticoid receptor antagonist (MRA).

319 RESTRICTED. Use only in acute management of severe pregnancy-induced hypertension. NOT recommended for use in treatment of essential hypertension in view of greater efficacy and safety of other medicines.

320 Use for management of resistant hypertension.

321 Use for management of resistant hypertension.

#	Name of Medicine	Dose-form	Strength / Size	LOU
14.3.6.5 non-selective alpha adrenoceptor antagonist				
14.3.6.5.1	Phenoxybenzamine ³²²	Capsule	10mg	5
14.3.6.6 Others				
14.3.6.6.1	Bosentan ³²³	Tablet	62.5mg	4
14.3.6.6.2	Sildenafil ³²⁴	Tablet	25mg	4
14.3.6.6.3	Tadalafil ³²⁵	Tablet	20mg	4
14.3.7 Combination Antihypertensive medicines <i>Fixed dose combination (FDC) drugs are recommended as they minimize toxicity and therefore side effects as well as improve adherence to treatment.</i>				
14.3.7.1	Amlodipine + Hydrochlorothiazide (HCTZ)	Tablet	5mg + 12.5mg	3
14.3.7.2	Amlodipine + Indapamide	Tablet	5mg + 1.25mg	3
14.3.7.3	Lisinopril + Hydrochlorothiazide (HCTZ)	Tablet	20mg + 12.5mg	3
14.3.7.4	Losartan + Hydrochlorothiazide (HCTZ)	Tablet	50mg + 12.5mg	3
14.3.7.5	Perindopril + Amlodipine	Tablet	5mg + 5mg	3
			5mg + 10mg	5
14.3.7.6	Perindopril + Amlodipine + Indapamide	Tablet (Film-coated)	5mg + 5mg + 1.25mg	4
			10mg + 10mg + 2.5mg	4
14.3.7.5	Telmisartan + Amlodipine	Tablet	40mg + 5mg	3
14.3.7.6	Telmisartan+ Amlodipine+ Hydrochlorothiazide (HCTZ)	Tablet	40mg + 5mg + 12.5mg	4
14.3.7.7	Telmisartan + Hydrochlorothiazide (HCTZ)	Tablet	40mg + 12.5mg	3
			80mg + 12.5mg	3

322 Use in management of Pheochromocytoma.

323 Use for management of pulmonary arterial hypertension. For specialist use only.

324 Use for management of pulmonary hypertension. For specialist use only.

325 Use for management of pulmonary arterial hypertension. Different strengths used for other indications of the molecule. For specialist use only.

#	Name of Medicine	Dose-form	Strength / Size	LOU
14.4 Medicines used in Heart Failure				
14.4.1	Bisoprolol	Tablet	2.5mg	4
			5mg	4
14.4.2	Carvedilol	Tablet	3.125mg	
			6.25mg	4
			12.5mg	4
			25mg	4
14.4.3	Digoxin	Oral liquid ³²⁶	50 micrograms/mL	4
		Tablet	125 micrograms	4
14.4.4	Dobutamine	Injection (solution)	12.5mg/mL (20mL)	5
14.4.5	Dopamine ³²⁷	Injection	40mg/mL (as HCl) (5mL vial)	5
14.4.6	Empagliflozin	Tablet	10mg	5
14.4.7	Enalapril	Tablet (scored)	5mg (as hydrogen maleate)	4
14.4.8	Eplerenone	Tablet	25mg	4
14.4.9	Furosemide	Injection	10mg/mL (2mL amp)	4
		Tablet (cross-scored) ³²⁸	40mg	3
14.4.10	Hydralazine	Tablet	25mg (as HCl)	4
			50mg (as HCl)	4
14.4.11	Isosorbide dinitrate	Tablet	20mg	4
14.4.12	Ivabradine	Tablet (f/c)	5mg	5
		Tablet (f/c)	7.5mg	5

³²⁶ Measure doses with graduated pipette provided.

³²⁷ Should only be used when there is protracted hypotension. Only for use in ICU.

³²⁸ Use for management of Hypertension in patients with renal failure.

#	Name of Medicine	Dose-form	Strength / Size	LOU
14.4.13	Losartan	Tablet (f/c)	50mg	4
14.4.14	Metolazone ³²⁹	Tablet	5mg	5
14.4.15	Milrinone ³³⁰	Injection (solution)	1mg/mL (10mL)	6
14.4.16	Nitroglycerin (NTG)	Injection	2.5mg/mL (10mL) amp	5
14.4.17	Norepinephrine (Noradrenaline) ³³¹	Injection	1mg/mL	5
14.4.18	Sacubitril + Valsartan ³³²	Tablet (f/c)	24mg + 26mg	5
			48mg + 52mg	5
14.4.19	Spirolactone	Tablet (scored)	25mg	4
14.4.20	Torsemide ³³³	Tablet (scored)	20mg	4
			10mg	4
14.5 Antithrombotic medicines				
14.5.1 Anti-platelet medicines				
14.5.1.1	Acetylsalicylic acid (Aspirin)	Tablet	75mg	4
14.5.1.2	Clopidogrel	Tablet	75mg	4
14.5.1.3	Acetylsalicylic acid (Aspirin) + Clopidogrel	Tablet	75mg + 75mg	4
14.5.2 Thrombolytic medicines				
14.5.2.1	Alteplase ³³⁴	PFI	50mg	5
			100mg	5
14.5.2.2	Retepase ³³⁵	PFI	10 Units	5

329 Use for management of oedema in people with congestive heart failure.

330 Use only in Hospitals with Critical Care units for patients with pulmonary Hypertension especially post-operative open-heart surgery, under close supervision by specialist.

331 Use only when there is protracted hypotension.

332 First line treatment for heart failure.

333 Use in patients needing enhanced diuretic effect.

334 Only for use in hospitals with ICU and specialist. Use as alternative for tenecteplase and reteplase depending on cost and availability.

335 Only for use in hospitals with ICU and specialist. Use as alternative for tenecteplase and alteplase depending on cost and availability.

#	Name of Medicine	Dose-form	Strength / Size	LOU
14.5.2.3	Tenecteplase ³³⁶	PFI with prefilled syringe with 10mL water for injection	50mg (10000IU)	5
14.6 Lipid-lowering agents				
14.6.1	Atorvastatin	Tablet	20mg	3
			40mg	3
			80mg	3
15. DERMATOLOGICAL MEDICINES (Topical)				
15.1 Antifungal medicines				
15.1.1	Clotrimazole	Cream	1%	2
15.1.2	Miconazole	Cream	2% (as nitrate)	3
15.1.3	Terbinafine ³³⁷	Cream	1% (as HCl)	4
15.2 Anti-infective medicines				
15.2.1	Fusidic acid ³³⁸	Ointment	2% (15g)	4
15.2.2	Mupirocin ³³⁹	Ointment	2% (15g)	4
15.2.3	Silver sulphadiazine ³⁴⁰	Cream	1% (50g)	2
			1% (250g)	2
15.3 Anti-inflammatory and antipruritic medicines				
15.3.1	Betamethasone ³⁴¹	Cream	0.1% (as valerate)	4
		Ointment ³⁴²	0.1% (as valerate)	4
15.3.2	Calamine	Lotion	15%	1
15.3.3	Clobetasone propionate	Ointment	0.05%	4

336 Only for use in hospitals with ICU and specialist. Use as alternative for alteplase and reteplase depending on cost and availability.

337 Use in refractive infections in combination with other drugs.

338 Use restricted to <14 days. Sodium fusidate cream 2% may also be used.

339 Use for prevention of local infection when performing dialysis procedures.

340 Use only in patients aged >2 months.

341 Avoid use in neonates (hydrocortisone cream preferred).

342 Use for management of longer-lasting skin conditions.

#	Name of Medicine	Dose-form	Strength / Size	LOU
15.3.4	Crotamiton ³⁴³	Cream	10% (30g)	2
15.3.5	Hydrocortisone	Cream	1% (as acetate)	3
		Ointment	1% (as acetate)	3
15.3.6	Mometasone ³⁴⁴	Ointment	0.1% (as furoate) (30g)	4
15.3.7	Tacrolimus ³⁴⁵	Ointment	0.03% (as monohydrate) (10g)	4
			0.1% (as monohydrate) (10g)	4
15.4 Medicines affecting skin differentiation and proliferation				
15.4.1	Benzoyl peroxide ³⁴⁶	Gel	5% (30g)	4
15.4.2	Dithranol ³⁴⁷	Paste	2%	4
15.4.3	Podophyllin resin ³⁴⁸	Solution	15% (in benzoin tincture) (15mL)	3
15.4.4	Salicylic acid ³⁴⁹	Ointment	3%	4
15.4.5	Tretinoin ³⁵⁰	Cream	0.05%	4
15.5 Scabicides and pediculicides				
15.5.1	Benzyl Benzoate ³⁵¹	Lotion	25% (50mL)	2
15.5.2	Calamine	Lotion	15%	1
15.5.3	Crotamiton ³⁵²	Cream	10% (30g)	2

343 Use for management of pruritus (especially after scabies).

344 Potent topical steroid.

345 Medicine of choice in children since is not steroid based; also use for management of moderate to severe atopic eczema, especially if refractory.

346 Use for management of acne vulgaris.

347 Use for management of Psoriasis. Not commercially available hence for extemporaneous preparation from Dithranol powder.

348 Use for management of warts and for keratosis.

349 Use for management of dermatitis, scabies, psoriasis, and acne.

350 For management of Acne vulgaris.

351 Not for use in children (use Crotamiton).

352 Use for management of pruritus (especially after scabies).

#	Name of Medicine	Dose-form	Strength / Size	LOU
15.6 Medicines for Jiggers				
15.6.1	Benzyl Benzoate ³⁵³	Lotion	25% (50mL)	2
15.6.2	White soft paraffin (Petroleum jelly) ³⁵⁴	Topical application	100g	1
15.7 Sunscreen preparations				
15.7.1	Sun screening agent(s) ³⁵⁵	Cream or lotion	SPF 50+	1
16. DIAGNOSTIC AGENTS				
16.1 Ophthalmic diagnostics				
16.1.1	Fluorescein	Test strip	0.6mg	4
16.1.2	Tropicamide + Phenylephrine ³⁵⁶	Eye drops	0.8% + 5% w/v	4
<p>16.2 Radiocontrast media</p> <p><i>A Health facility should have an equipped emergency tray in case of a reaction from any contrast media. All patient reactions to contrast media must be documented - using the pharmacovigilance forms provided with the product by the manufacturer. The health facility should also maintain a register for the same. The register should capture: Unique patient identifier; 3 patient names; Hospital name; Examination number; contrast agent name and formulation; dose amount; date, time & method of administration; injection site; any adverse reactions; document type; renal function tests for serum creatinine and eGFR before examination (Ref. ACR manual on contrast media, ver 10.3, 2018).</i></p>				
16.2.1	Amidotrizoate ³⁵⁷	Solution (oral and rectal use)	370-420mg iodine/mL (as sodium or meglumine salt) (100mL)	4
16.2.2	Barium sulphate	Suspension (aq)	95% w/w concentration (1 litre)	4
		Paste (for oral or rectal use) ³⁵⁸	92% w/w concentration	4
16.2.3	Iso-osmolar contrast media ³⁵⁹	Solution for IV injection/ infusion	320mg iodine/mL (100mL)	4

353 Not for use in children.

354 Use for management of jiggers. Also called White petrolatum.

355 Must have 50-plus Sun Protection Factor (SPF) and protect against both UVA and UVB, especially protecting against 98% of UVB rays. Various preparations may be available.

356 Use in cataract surgery and eye examinations.

357 For non-injectable use. Restrict to areas that will not be in contact with intravascular compartments.

358 Used as enema. Not commercially available; must be compounded as extemporaneous preparation.

359 Use for patients with high risk profile (diabetes, oncology, etc) with dehydration and needing urgent contrast examinations (at risk of nephrotoxicity, etc), also for intra-arterial injection.

#	Name of Medicine	Dose-form	Strength / Size	LOU
16.2.4	Non-ionic low osmolar water-soluble iodinated contrast media ³⁶⁰	Injection	300mg iodine/mL (50mL) [c] ³⁶¹	4
			300mg iodine/mL (100mL) [c] ³⁶²	4
			350mg iodine/mL (50mL) ³⁶³	4
			350mg iodine/mL (100mL) ³⁶⁴	4
			300mg iodine/mL (50mL) [For intrathecal, oral, intra-cavitary and intravenous use] [c] ³⁶⁵	4
			300mg iodine/mL (100mL) [For intrathecal, oral, intra-cavitary and intravenous use] [c] ³⁶⁶	4
			350mg iodine/mL (50ml) [For oral, intra-cavitary and intravenous use] ³⁶⁷	4
			350mg iodine/mL (100ml) [For oral, intra-cavitary and intravenous use] ³⁶⁸	4
16.3 MRI contrast media Only a Radiologist should recommend use of Contrast media for MRI. Only use MRI Contrast media when necessary.				
16.3.1	Gadobutrol	Injection (solution) (IV)	1mmol/mL (7.5mL) ³⁶⁹	4
			1mmol/mL (15mL) ³⁷⁰	4
16.3.2	Gadodiamide	Injection (solution) (IV)	0.5 mmol/mL (20mL) ³⁷⁰	4

360 Common example is Iohexol and may be used interchangeably.

361 For use in children.

362 For use in children.

363 For use in adults.

364 For use in adults.

365 For use in children. Low osmolar water soluble iodinated contrast media with specific manufacturer recommendations for use in the listed anatomical regions.

366 For use in children. Low osmolar water soluble iodinated contrast media with specific manufacturer recommendations for use in the listed anatomical regions.

367 Low osmolar water soluble iodinated contrast media with specific manufacturer recommendations for use in the listed anatomical regions.

368 Low osmolar water soluble iodinated contrast media with specific manufacturer recommendations for use in the listed anatomical regions.

369 Equivalent to 604.72mg/mL.

370 Equivalent to 287mg/mL.

#	Name of Medicine	Dose-form	Strength / Size	LOU
16.3.3	Gadopentate dimeglumine	Injection (solution) (IV)	0.5 mmol/mL (10mL) ³⁷¹	4
			0.5 mmol/mL (15mL) ³⁷²	4
17. DISINFECTANTS and ANTISEPTICS				
17.1 Antiseptics				
17.1.1	Chlorhexidine	Solution for dilution	5% (as gluconate/digluconate)	2
17.1.2	Ethanol	Solution	70% (denatured)	2
17.1.3	Povidone iodine	Solution	10% (equiv. to Iodine 1%)	2
17.2 Disinfectants				
17.2.1	Alcohol-based hand rub	Solution	Isopropyl alcohol 75% (500mL dispenser)	1
17.2.2	Glutaral ³⁷²	Solution	2%	2
17.2.3	Sodium hypochlorite	Solution	4-6% chlorine ³⁷³	1
18. DIURETICS				
18.1	Amiloride	Tablet	5mg (as HCl)	4
18.2	Furosemide ³⁷⁴	Injection	10mg/mL (2mL amp)	4
		Oral liquid	20mg/5mL [c] ³⁷⁵	4
		Tablet (cross-scored)	40mg	4
18.3	Hydrochlorothiazide (HCTZ)	Tablet (scored)	25mg	4
18.4	Mannitol	Injectable solution	20%	4
18.5	Metolazone	Tablet	5mg	5
18.6	Spironolactone ³⁷⁶	Tablet (cross-scored)	25mg	4
		Tablet (scored)	100mg	4

371 Equivalent to 469.01mg/mL.

372 Previously called Activated Glutaraldehyde. Use within 6 months of date of manufacture. Only use freshly made dilutions.

373 Provides approximately 50,000ppm available chlorine.

374 Can also be used for management of Hypertension in patients with renal failure.

375 Paediatric strength not commercially available. For extemporaneous preparation using furosemide tablets.

376 Diuretic for use in older patients.

#	Name of Medicine	Dose-form	Strength / Size	LOU
18.7	Torsemide	Tablet	10mg	4
			20mg	4
19. GASTROINTESTINAL MEDICINES				
19.1 Antiulcer medicines				
19.1.1	Lansoprazole	Tablet (dispersible)	15mg [c] ³⁷⁷	4
19.1.2	Omeprazole	PFI ³⁷⁸	40mg (as sodium salt) vial	4
		Capsule	20mg	3
19.1.3	Pantoprazole	Tablet (dispersible)	20mg	3
		Capsule	20mg	3
		PFI	40mg	4
19.2 Antiemetics				
19.2.1	Dexamethasone	Tablet	4mg	4
			2mg	4
			0.5mg	4
		Injection	4mg/mL in 1mL amp as disodium phosphate salt	4
19.2.2	Domperidone ³⁷⁹	Oral liquid	5mg/5mL	5
		Tablet	10mg	3
19.2.3	Fosaprepitant ³⁸⁰	Injection	150mg	5
19.2.4	Metoclopramide ³⁸¹	Injection	5mg/mL (2mL amp)	2
		Tablet	10mg	2

377 For paediatric use.

378 Use in management of severe peptic ulcer as well as peptic ulcer in general when oral route is not possible.

379 Alternative in patients who cannot tolerate Metoclopramide and in young children requiring an oral liquid antiemetic. For children, use under close supervision of a Paediatrician. Additional restrictions apply (small increased risk of serious cardiac side effects).

380 Use in combination with other antiemetic medicines for management of stubborn emesis and prevention chemotherapy induced nausea and vomiting.

381 Metoclopramide should only be prescribed for short-term use (up to 3 days). Thereafter, review need for use. Not for use in Children.

#	Name of Medicine	Dose-form	Strength / Size	LOU
19.2.5	Olanzapine ³⁸²	Tablet	5mg	5
19.2.6	Ondansetron ³⁸³	Injection	2mg (as HCl)/mL (2mL amp)	2
		Oral liquid	4mg base/5mL [c] ³⁸⁴	2
		Tablet	4mg (as HCl)	2
19.2.7	Palonosetron ³⁸⁵	Injection	0.05mg/mL, 5mL vial	4
19.3 Anti-inflammatory medicines				
19.3.1	Mesalazine	Tablet (e/c)	400mg	4
		Suppository	1g	5
		Enema	4g/60mL	5
19.3.2	Prednisolone	Tablet	5mg	4
19.4 Laxatives				
19.4.1	Bisacodyl	Tablet	5mg	2
		Suppository	5mg	2
19.4.2	Lactulose ³⁸⁶	Oral liquid	3.1-3.7g/5mL	4
19.5 Medicines used in Diarrhoea and Oral Rehydration				
19.5.1	Oral rehydration salts + Zinc sulphate	Co-pack (4 sachets + 10 Tablet (dispersible))	PFOL in sachet to make 500mL + 20mg Tablet [c]	2
19.5.2	Oral rehydration salts (ORS)	PFOL (to make 500mL)	Sachet (WHO low-osmolarity formula)	1
19.5.3	Rehydration solution for malnutrition (ReSoMal) ³⁸⁷	PFOL (to make 1L)	Sachet (42g) (WHO formula)	4
19.6 Vasoconstrictor Medicines				
19.6.1	Terlipressin ³⁸⁸	Injection	1mg (as acetate) in 8.5ml solution	4

382 For control of emesis and stimulation of appetite.

383 Not for use in first trimester of pregnancy. Use only in children >6 months old.

384 Use only in children >6 months old.

385 Long acting, use for highly emetogenic chemotherapy in combination with other antiemetics.

386 Preferred for use in elderly patients.

387 used for rehydration in children with severe acute malnutrition as it has lower sodium, higher potassium, glucose and lower osmolarity compared to ORS.

388 Containing 0.1 mg/ml Terlipressin. Use for management of variceal bleeding and hepatorenal syndrome.

#	Name of Medicine	Dose-form	Strength / Size	LOU
19.7 Medicines used for Ascites and GI bleeding				
19.7.1	Propranolol	Tablet	20mg	4
			40mg	4
19.7.2	Spironolactone	Tablet	25mg	4
			100mg	4
20. MEDICINES for ENDOCRINE DISORDERS				
20.1 Adrenal Hormones & Synthetic Substitutes				
20.1.1	Fludrocortisone ³⁸⁹	Tablet	100 micrograms (as acetate)	4
20.1.2	Hydrocortisone ³⁹⁰	Tablet	5mg	4
			20mg	4
		Injection	100mg/vial	2
20.2 Androgens				
20.2.1	Testosterone	Gel ³⁹¹	1%	4
		Injection (oily) ³⁹²	250mg (as enanthate)/1mL amp	4
20.3 Oestrogens				
20.3.1	Conjugated Oestrogens	Tablet ³⁹³	300 micrograms	4
		Cream (Vaginal) ³⁹⁴	0.625mg/g (30g)	4
20.3.2	Estradiol ³⁹⁵	Transdermal patch	0.1mg/day	4
20.4 Progestogens				
20.4.1	Medroxyprogesterone ³⁹⁶	Tablet	5mg (as acetate)	4

389 Use in management of congenital adrenal hyperplasia.

390 Use in management of congenital adrenal hyperplasia in newborns for long-term use, Addison's disease.

391 Use for treatment of disorders of sexual development.

392 Use in management of delayed puberty and in hypogonadism due to androgen deficiency in men.

393 Use as Hormone Replacement Therapy (HRT).

394 Use as Hormone Replacement Therapy (HRT); also used in management of labial fusion or urethrocele in women or young girls.

395 Use for management of all cases of delayed puberty including Turner's syndrome.

396 Use for management of menstrual conditions and abnormal uterine bleeding.

#	Name of Medicine	Dose-form	Strength / Size	LOU
20.5 Medicines for diabetes				
20.5.1 Insulins				
20.5.1.1	Insulin, intermediate-acting (NPH)	Injection	100 IU/mL (10mL vial)	4
20.5.1.2	Insulin, long-acting, Detemir	Injection	100IU/mL (10mL vial)	4
			100 IU/mL (3 mL cartridge or prefilled pen)	4
20.5.1.3	Insulin, Long-acting (basal), Glargine	Injection	100 IU/mL (10mL vial)	4
			100 IU/mL (3 mL cartridge or prefilled pen)	4
20.5.1.4	Insulin, Premixed (Short acting + Intermediate acting) (Human) ³⁹⁷	Injection	100 IU/mL (10mL vial)	4
			100 IU/mL (3mL prefilled pen)	4
20.5.1.5	Insulin, Premixed (Ultra short acting + Intermediate acting) ³⁹⁸	Injection	100 IU/mL (10mL vial)	4
			100 IU/mL (3mL prefilled pen)	4
20.5.1.6	Insulin, Short acting (Soluble / regular)	Injection	100 IU/mL (10mL vial)	3
			100IU/mL (3mL penfill)	3
20.5.1.7	Insulin, Ultra short-acting (Rapid) (Insulin Lispro and Aspart)	Injection	100 IU/mL (10mL vial)	4
			100IU/mL (3mL prefilled pen)	4
20.5.2 Oral hypoglycaemic agents				
20.5.2.1 Sulphonylureas				
20.5.2.1.1	Gliclazide ³⁹⁹	Tablet (m/r)	30mg	3
			60mg	3
		Tablet (i/r)	40mg	3
			80mg	3

397 Premix insulin (30 Regular + 70 NPH).

398 Premix insulin (25% Ultra short acting + 75% Intermediate acting). Recombinant Human Insulin Analogue

399 Can be used for chronic kidney disease (CKD) as it is cardio protective unlike Glibenclamide.

#	Name of Medicine	Dose-form	Strength / Size	LOU
20.5.2.2 Biguanides				
20.5.2.2.1	Metformin ⁴⁰⁰	Tablet	500mg (as HCl)	3
			850mg (as HCl)	3
			1gm (as HCl)	3
20.5.2.3 Thiazolidinediones				
20.5.2.3.1	Pioglitazone ⁴⁰¹	Tablet	15mg	4
			30mg	4
20.5.2.4 Dipeptidylpeptidase (DPP)-4 inhibitors (Gliptins)				
20.5.2.4.1	Linagliptin ⁴⁰²	Tablet (f/c)	5mg	5
20.5.2.4.2	Sitagliptin ⁴⁰³	Tablet	50mg	4
			100mg	5
20.5.2.5 SGLT-2 inhibitors				
20.5.2.5.1	Empagliflozin ⁴⁰⁴	Tablet	10mg	4
			25mg	5
20.5.2.6 Fixed Dose Combinations				
20.5.2.6.1	Empagliflozin + Metformin	Tablet (i/r)	12.5mg + 500mg	4
			12.5mg + 1000mg	4
			5mg + 500mg	4
			5mg + 1000mg	4
20.5.2.6.2	Pioglitazone + Metformin	Tablet	15mg + 500mg	4
			15mg + 850mg	4

400 Age restriction: For use for management of Type 2 diabetes mellitus in child of age 10-17 years

401 Use in management of Type 2 diabetes mellitus (alone or combined with Metformin or a Sulphonylurea, or with both, or with insulin)

402 Alternative to sitagliptin - No dose adjustment in CKD required and ideal in set-up where frequent monitoring of creatinine clearance is not feasible.

403 Use in patients with Type 2 Diabetes mellitus where other antidiabetic drugs have failed to achieve effective glycaemic control. Dose adjustment required in moderate and chronic CKD.

404 Use in patients with Type 2 Diabetes mellitus where other antidiabetic drugs have failed to achieve effective glycaemic control; Known to have cardiovascular benefits.

#	Name of Medicine	Dose-form	Strength / Size	LOU
20.5.2.6.3	Sitagliptin + Metformin	Tablet	50mg + 500mg	4
			50mg + 850mg	4
			50mg + 1000mg	4
20.6 Medicines for hypoglycaemia				
20.6.1	Diazoxide ⁴⁰⁵	Suspension	50mg/mL	4
20.6.2	Glucagon	injection	1mg/mL	4
20.7 Thyroid Hormones and Anti-thyroid Medicines				
20.7.1	Carbimazole	Tablet	5mg	4
			10mg	4
20.7.2	Levothyroxine	Tablet	25 micrograms [c] (as sodium salt)	4
			50 micrograms (as sodium salt)	4
			100 micrograms (as sodium salt)	4
20.7.3	Lugol's Iodine solution ⁴⁰⁶	Solution	~130mg total iodine/mL	4
20.7.4	Propranolol ⁴⁰⁷	Tablet (scored)	40mg	4
20.7.5	Propylthiouracil ⁴⁰⁸	Tablet	50mg	4
20.8 Medicines for Management of Hyperparathyroidism				
20.8.1	Calcitriol (Vit D3) ⁴⁰⁹	Capsule	250 micrograms	4
		Injection	1 microgram/mL (1 mL)	4
20.9 Other endocrine medicines				
20.9.1	Cabergoline ⁴¹⁰	Tablet	0.5mg	4

405 Use to manage hypoglycaemia in new-borns. Suspension not commercially available; has to be compounded as extemporaneous preparation.

406 Use for management of thyroid conditions and protection of thyroid gland after radiation exposure or radioactive iodine treatment. Oral liquid not commercially available; compounded from Potassium iodide powder as extemporaneous preparation.

407 Use in management of hyperthyroidism.

408 Use as medicine of choice (i.e., rather than Carbimazole) during 1st trimester of pregnancy and in lowest effective dose to control hyperthyroid state.

409 Use for management of Hypocalcaemia in CKD patients undergoing chronic renal dialysis.

410 For management of hyperprolactinemia / suppression of lactation.

#	Name of Medicine	Dose-form	Strength / Size	LOU
20.9.2	Desmopressin	Injection ⁴¹¹	4mcg/mL	5
		Nasal spray ⁴¹²	10mcg/spray	5
20.9.3	Somatropin (recombinant human growth hormone) ⁴¹³	Prefilled pen	12mg	5
21. IMMUNOLOGICALS				
21.1 Diagnostic agents				
21.1.1	Tuberculin, purified protein, derivative (PPD) ⁴¹⁴	Injection (solution)	0.1mL vial (single dose)	4
21.2 Sera and Immunoglobulins				
21.2.1	Anti Snake venom immunoglobulin ⁴¹⁵	Injection (for IV infusion)	Polyvalent serum (African) (10mL vial)	4
21.3 Vaccines				
Recommended for all				
21.3.1	BCG vaccine (live attenuated)	PFI + diluent	1mL vial (multi doses)	2
21.3.2	DPT + Hib + Hep B vaccine (pentavalent) ⁴¹⁶	Injection (suspension)	5mL vial (10 doses)	2
21.3.3	Hepatitis B vaccine	Injection (suspension)	Single dose vial	2
		Injection (suspension)	Multi dose vial	2
21.3.4	HPV vaccine (quadrivalent) ⁴¹⁷	Injection	Single or multi dose vial	2
21.3.5	Measles + Rubella vaccine (MR) ⁴¹⁸	PFI + diluent	5mL vial (10 doses)	2
21.3.6	Pneumococcal vaccine (10-valent ads. conjugate)	Injection (suspension)	2mL vial (4 doses)	2

411 Used in management of acute central diabetes insipidus.

412 Use in management of chronic central diabetes insipidus.

413 Use in management of hypoglycaemia due to growth hormone deficiency.

414 Contains 2 tuberculin units (TU)/0.1mL. For Mantoux test i.e., for screening for tuberculosis and for tuberculosis diagnosis.

415 16 species mixture covering Bitis, Naja, Echis, Dendroaspis, Pseudohaje, Dispholidus, Thelotornis, Hydrophis spp

416 Each dose of 0.5 ml contains: Diphtheria Toxoid, Tetanus Toxoid, B. pertussis (whole cell), HBsAg (rDNA), Purified capsular Hib Polysaccharide (PRP).

417 Human papillomavirus vaccine containing 6, 11, 16 and 18 serotypes. For school health programme roll-out.

418 It is recommended not to provide the vaccine to those with active TB or severe immunodeficiency (including individuals with symptomatic HIV infection, AIDS, congenital immune disorders, malignancies, or aggressive immunosuppressive therapy; Reconstituted multi-dose vials should be discarded at the end of six hours or at the end of the vaccination session, whichever comes first.

#	Name of Medicine	Dose-form	Strength / Size	LOU
21.3.7	Pneumococcal vaccine (13 valent or higher adsorbed conjugate) ⁴¹⁹	Injection (syringe)	Single or multi dose vial	2
21.3.8	Polio vaccine (IPV)	Injection	Multi dose vial	2
21.3.9	Polio vaccine, oral (OPV) (live attenuated)	Oral drops	10mL vial (20 doses)	2
21.3.10	Rotavirus vaccine ⁴²⁰	Oral suspension	5 dose vial	2
21.3.11	Tetanus + Diphtheria (Td) vaccine ⁴²¹	Injection	10mL vial (20 doses)	2
21.3.12	Tetanus + Diphtheria + Pertussis (Tdap) vaccine ⁴²²	Injection	0.5mL (single dose)	2
Recommended for some regions				
21.3.13	Yellow fever vaccine (live, attenuated) ⁴²³	Injection	Single or multi dose vial	2
Recommended for some high-risk populations				
21.3.14	Cholera vaccine	Oral suspension	1.5mL vial (single dose) - single dose vial	2
21.3.15	Hepatitis A vaccine	Injection	80 units (Paed)	2
			160 units (Adult)	2
21.3.16	Malaria vaccine ⁴²⁴	Injection	1mL vial (2 doses)	2
21.3.17	Meningococcal meningitis vaccine ⁴²⁵	Injection	Single or multi dose	2
21.3.18	Rabies vaccine (cell culture)	Injection	Single dose (Purified Verocell / Human diploid)	2
21.3.19	Typhoid vaccine ⁴²⁶	Injection (solution)	Single or multi dose	2
Recommended for immunisation programmes with certain characteristics				
21.3.20	Influenza vaccine (inactivated) ⁴²⁷	Injection	0.5mL vial (single dose)	2

419 For use in special populations e.g., patients with sickle-cell disease, adults and adolescents living with HIV.

420 Must be discarded at the end of six hours or at the end of the vaccination session, whichever comes first.

421 Use to reinforce immunization of adults, adolescents, and children over 10 years.

422 Use to reinforce immunization of adults, adolescents, and children over 11 years.

423 Use only for health workers during outbreaks and for travellers to areas with yellow fever. A valid certificate refers to the evidence that the vaccination against yellow fever was done at least ten days prior to the day of departure. A single dose confers life-long immunity.

424 Use to prevent malaria in young children (pilot program).

425 Sero-type specific. Use for outbreaks, vaccination of asplenic patients and travellers to affected areas.

426 Use is reserved for specific at-risk patients, i.e., nephrotics, immunosuppressed patients, travellers to typhoid prevalent areas.

427 For use in special populations e.g., geriatric patients (age \geq 65 years), adults and adolescents living with HIV

#	Name of Medicine	Dose-form	Strength / Size	LOU
22.OPHTHALMOLOGICAL PREPARATIONS				
22.1 Anti-infective agents				
22.1.1	Acyclovir ⁴²⁸	Eye ointment	3%	4
22.1.2	Dexamethasone + Polymixin B sulphate + Neomycin sulphate ⁴²⁹	Ointment	1mg dexamethasone, 6000 IU polymixin B sulphate, 3500 IU neomycin sulphate	4
22.1.3	Erythromycin ⁴³⁰	Eye ointment	0.5% [c]	4
22.1.4	Gentamicin	Eye drops	0.3% (as sulphate) (10mL)	2
22.1.5	Gentamicin + Dexamethasone ⁴³¹	Eye drops	0.3% + 0.1%	4
22.1.6	Moxifloxacin	Eye drops	0.5% (as HCL)	5
22.1.7	Natamycin ⁴³²	Eye drops	5%	5
22.1.8	Ofloxacin	Eye drops	0.3% (as sulphate)	4
22.1.9	Ofloxacin + Dexamethasone	Solution (eye-drops)	0.3 + 0.1%	4
22.1.10	Tetracycline	Eye ointment	1% (as HCl)	1
22.1.11	Tobramycin	Solution (eye-drops)	0.3% (as sulphate)	3
22.1.12	Tobramycin + Dexamethasone	Solution (eye-drops)	0.3 + 0.1%	4
22.1.13	Voriconazole	Powder for eye-drops	1% w/v (Lyophilized)	5
22.2 Anti-inflammatory agents				
22.2.1	Dexamethasone	Solution (eye-drops)	0.1%	4
22.2.2	Fluorometholone ⁴³³	Solution (eye-drops)	0.1%	4
22.2.3	Ketorolac trometamol ⁴³⁴	Solution (eye-drops)	0.5%	4

428 Also known as Aciclovir.

429 Post-op after cataract surgery, allergic conjunctivitis.

430 Use in treatment of infections due to Chlamydia trachomatis or Neisseria gonorrhoea.

431 For use by patients post-cataract surgery

432 Better antifungal medicine for fungi common to Kenya.

433 Use for treating mild allergies when a stronger steroid e.g., Prednisolone is not necessary.

434 Use for pain management post-surgery.

#	Name of Medicine	Dose-form	Strength / Size	LOU
22.2.4	Methylprednisolone ⁴³⁵	PFI	1g vial (as sodium succinate)	5
22.2.5	Prednisolone	Solution (eye-drops)	1% (as acetate) (5mL)	4
22.2.6	Triamcinolone ⁴³⁶	Injection suspension	40mg/1mL amp (as acetate or hexacetate)	5
22.3 Local Anaesthetics				
22.3.1	Lignocaine ⁴³⁷	Solution (eye-drops)	2% (as HCL)	4
22.3.2	Lignocaine + Epinephrine (Adrenaline)	Solution (eye-drops)	Lignocaine 2% and Epinephrine (Adrenaline) 1:100,000 or 1:200,000 (as HCl)	5
22.3.3	Proparacaine ⁴³⁸	Solution (eye-drops)	0.5% (as HCl)	4
22.3.4	Tetracaine	Solution (eye-drops)	0.5% (as HCl)	4
22.4 Miotics and Anti-Glaucoma Medicines				
22.4.1	Acetazolamide ⁴³⁹	Tablet	250mg	4
22.4.2	Bimatoprost ⁴⁴⁰	Solution (eye-drops)	0.01%	4
			0.03%	4
22.4.3	Bimatoprost + Timolol	Solution (eye-drops)	Bimatoprost 0.03% +Timolol 0.5%	4
22.4.4	Brimonidine + Timolol	Solution (eye-drops)	Brimonidine 0.2% +Timolol 0.5%	5
22.4.5	Dorzolamide	Solution (eye-drops)	2% (as HCl)	4
22.4.6	Latanoprost	Solution (eye-drops)	0.005%	4
22.4.7	Pilocarpine	Solution (eye-drops) ⁴⁴¹	4% (as HCl or nitrate)	5
			2%	5
			1%	5
		Injection ⁴⁴²	0.5% w/v(as nitrate) vial	5

435 Use for management of Optic neuritis under supervision of a specialist.

436 Use for management of severe intractable allergies under supervision of a specialist.

437 Local Anaesthesia used during Ocular surgery.

438 Topical anaesthesia for ophthalmic use; Also used for Phacoemulsification.

439 Use for severe glaucoma.

440 Alternative to latanoprost; does not require refrigeration.

441 Use for angle-closure glaucoma and when preparing patients for glaucoma surgery.

442 For intraocular use for miosis during glaucoma or cataract surgery.

#	Name of Medicine	Dose-form	Strength / Size	LOU
22.4.8	Timolol	Solution (eye-drops)	0.5% (as hyd. maleate)	4
22.5 Mydriatics				
22.5.1	Atropine	Solution (eye-drops)	0.1% (as sulphate) [c] ⁴⁴³	4
			0.5% (as sulphate)	4
22.5.2	Cyclopentolate ⁴⁴⁴	Solution (eye-drops)	1%	4
22.5.3	Tropicamide + phenylephrine ⁴⁴⁵	Solution (eye-drops)	0.8% + 5% w/v	4
22.6 Anti-vascular endothelial growth factor (VEGF) preparations				
22.6.1	Aflibercept ⁴⁴⁶	Injection	0.05mL (2mg vial)	6
22.6.2	Bevacizumab ⁴⁴⁷	Injection	25mg/mL (4mL vial)	6
22.6.3	Ranibizumab ⁴⁴⁸	Injection	6mg/mL (0.3mg vial)	6
			10mg/mL (0.5mg vial)	6
22.7 Anti-allergy medicines for the eye				
22.7.1	Azelastine ⁴⁴⁹	Solution (eye-drops)	0.05%	3
22.7.2	Olopatadine ⁴⁵⁰	Solution (eye-drops)	0.1% (HCl)	5
			0.2% (HCl)	5
22.7.3	Sodium cromoglicate	Solution (eye-drops)	2%	5
22.8 Other medicines for the eye				
22.8.1	Hypertonic saline ⁴⁵¹	Solution (eye-drops)	3%	5
22.8.2	Methyl cellulose ⁴⁵²	Solution (eye-drops)	0.3 - 1%	4

443 For use in infants.

444 Cyclopentolate is more effective in children examination than atropine because it is short acting.

445 Use for Cataract surgery and eye examination.

446 For moderate to severe macula oedema.

447 Caution when preparing from multidose vial to prevent endophthalmitis risk; Sterile packaging required and adherence to 'use by date'.

448 For moderate to severe macula oedema.

449 Use for mild allergies.

450 Used for allergic conjunctivitis.

451 Use for management of corneal oedema. Made locally in sterile preparation units of health facilities.

452 Use for eye lubrication (Artificial tears).

#	Name of Medicine	Dose-form	Strength / Size	LOU
22.8.3	Polyacrylic acid ⁴⁵³	Eye Gel	0.2%	4
22.8.4	Riboflavin ⁴⁵⁴	Solution (eye-drops)	0.1% with Dextran	5
		Solution (eye-drops)	0.1% without Dextran	5
22.8.5	Sodium Hyaluronate ⁴⁵⁵	Solution (eye-drops)	1% (preoperative free)	4
22.8.6	Trypan blue ⁴⁵⁶	Intracameral Solution	0.06%	5
23. MEDICINES for REPRODUCTIVE HEALTH and PERINATAL CARE				
23.1 Contraceptives				
23.1.1 Oral hormonal contraceptives				
23.1.1.1	Ethinylestradiol + Levonorgestrel	Tablet	30 micrograms + 150 micrograms	2
23.1.1.2	Ethinylestradiol + Norethisterone	Tablet	35 micrograms + 1mg	2
23.1.1.3	Levonorgestrel ⁴⁵⁷	Tablet	30 micrograms	2
For Emergency contraception				
23.1.1.4	Levonorgestrel	Tablet	750 micrograms (pack of 2) ⁴⁵⁸	2
			1.5mg	2
23.1.2 Injectable hormonal contraceptives				
23.1.2.1	Medroxyprogesterone acetate (DMPA)	Depot Injection (IM) ⁴⁵⁹	150mg/1mL (prefilled syringe)	2
		Depot Injection (SC) ⁴⁶⁰	104 mg/0.65 mL (prefilled syringe)	2
23.1.3 Intrauterine devices (IUD)				
23.1.3.1	Copper-containing device ⁴⁶¹			2
23.1.3.2	Levonorgestrel (LNG) ⁴⁶²	LNG-releasing Intrauterine system (LNG-IUS)	Reservoir with 52mg	2

453 Used for dry eye syndrome.

454 Used for corneal crosslinking to prevent progression of corneal ectasia such as Keratoconus.

455 Used for dry eye syndrome.

456 For cataract surgery rhexis use.

457 Also known as Progestin-only pills (POPs).

458 Also known as Emergency contraceptive pills (ECP). Use for emergency contraception between 72- and 96-hours post coitus.

459 Also known as DMPA-IM. May be used at Level 1 (Community) in areas with community midwife services and in pharmacies with trained pharmacists and pharmaceutical technologists.

460 Also known as DMPA-SC. May be used at Level 1 (Community); May be self-administered.

461 Set (1 IUCD + applicator).

462 Also used in management of Abnormal Uterine bleeding.

#	Name of Medicine	Dose-form	Strength / Size	LOU
23.1.4 Contraceptive implants <i>May be used at Level 1 (Community) in areas with community midwife services.</i>				
23.1.4.1	Etonorgestrel-releasing implant	Implant	68mg (1 rod)	2
23.1.4.2	Levonorgestrel-releasing implant	Implant	150mg (2 x 75mg rods)	2
23.2 Ovulation Inducers				
23.2.1	Clomifene ⁴⁶³	Tablet	50mg (as citrate)	4
23.2.2	Human chorionic gonadotropin (HCG)	Injection	5,000 IU/vial	5
23.2.3	Human menopausal gonadotropin (HMG) ⁴⁶⁴	Injection	75 IU	5
23.2.4	Letrozole	Tablets	2.5mg	4
23.3 Medicines for treatment of Endometriosis				
23.3.1	Danazol	Capsule	50mg	4
23.3.2	Dienogest	Tablet	2mg	4
23.3.3	Goserelin	Injection (depot, SC)	3.6mg (as acetate)	4
23.3.4	Levonorgestrel (LNG)	LNG-releasing Intrauterine system (LNG-IUS)	Reservoir with 52mg	4
23.4 Medicines for treatment of Fibroids				
23.4.1	Goserelin	Injection (depot, SC)	3.6mg (as acetate)	4
23.4.2	Leuprorelin (Leuprolide)	Injection (depot, SC)	3.75mg (as acetate)	4
23.5 Medicines for treatment of Abnormal uterine bleeding				
23.5.1	Norethisterone ⁴⁶⁵	Tablet	5mg	4
23.6 Uterotonics (Medicines acting on the Uterus)				
23.6.1 Oxytocics				
23.6.1.1	Carbetocin ⁴⁶⁶	Injection (heat stable)	100 micrograms/mL	2
23.6.1.2	Carboprost ⁴⁶⁷	Injection	250 micrograms/mL (as tromethamine)	2

463 Also known as (Clomiphene).

464 Use for stimulation of ovulation and pregnancy in patients with ovulatory dysfunction not due to primary ovarian failure.

465 Also used for induction of menses, to counter effect of Estradiol.

466 Prevention of postpartum haemorrhage (PPH) in all births.

467 Uterotonic effective for PPH.

#	Name of Medicine	Dose-form	Strength / Size	LOU
23.6.1.3	Ergometrine ⁴⁶⁸	Injection	500 micrograms/1mL (as hydrogen maleate) amp	2
23.6.1.4	Mifepristone + Misoprostol ⁴⁶⁹	Tablet	Mifepristone 200mg (1 Tablet) and Misoprostol 200 micrograms (4 vaginal tablets) in Combi-pack	2
23.6.1.5	Misoprostol	Tablet	200 micrograms ⁴⁷⁰	2
		Vaginal Tablet	25 micrograms ⁴⁷¹	2
23.6.1.6	Oxytocin ⁴⁷²	Injection	10 IU/1mL amp	2
23.6.1.7	Prostaglandin E ₂ ⁴⁷³	Vaginal Tablet	3mg	4
23.7 Anti-oxytocics (Tocolytics)				
23.7.1	Salbutamol	Injection ⁴⁷⁴	500 micrograms (as sulphate)/mL (5mL amp)	4
23.7.2	Terbutaline	Injection ⁴⁷⁵	0.5mg/mL, 1mL	4
			0.5mg/mL, 5mL	4
23.8 Other medicines administered to the mother				
23.8.1	Dexamethasone ⁴⁷⁶	Injection	4mg (as disodium phosphate)/mL	4
23.8.2	Tranexamic acid ⁴⁷⁷	Injection	100mg/mL (10mL amp)	2
23.9 Medicines administered to the neonate [c]				
23.9.1	Caffeine citrate	Sterile solution for IV or oral use	20mg/mL [c] ⁴⁷⁸	4
			10mg/mL [c] ⁴⁷⁹	4

468 Use as adjuvant in treating PPH; Ergometrine must be judiciously administered to avoid the risk of inducing gangrene-causing vasoconstriction. Furthermore, the ability to address otherwise refractory atony may save many lives and avoid many unnecessary hysterectomies.

469 used ONLY for medical termination of pregnancy and is recommended within the first 9 weeks of gestation for medical indications as provided for in the Kenya constitution article 26.

470 Management of incomplete abortion and miscarriage; prevention and treatment of postpartum haemorrhage (PPH) where Oxytocin is not available or cannot be safely used.

471 Used for induction of labour.

472 Requires cold chain storage and transport.

473 Also known as Dinoprostone. Requires cold chain storage and transport. Used for induction of labour.

474 RESTRICTED. Use only for threatened abortion.

475 For IM Injection.

476 Management of pre-term labour.

477 Beneficial in reducing maternal mortality in pregnant women with PPH.

478 Equivalent to 10mg caffeine base/mL. Use for prevention and treatment of apnoea of prematurity.

479 Equivalent to 5mg caffeine base/mL. Use for prevention and treatment of apnoea of prematurity.

#	Name of Medicine	Dose-form	Strength / Size	LOU	
23.9.2	Chlorhexidine	Gel ⁴⁸⁰	7.1% (as digluconate) (20 g tube) [c]	2	
23.9.3	Ibuprofen	Injection solution	5mg/mL (2mL amp) [c]	5	
23.9.4	Prostaglandin E ₂ ⁴⁸¹	Injection solution	1mg/mL [c]	5	
23.9.5	Sildenafil ⁴⁸²	PFOL	10mg/mL	5	
23.9.6	Surfactant	Suspension for intratracheal instillation	25mg/mL [c] ⁴⁸³	5	
			80mg/mL [c] ⁴⁸⁴	5	
24. DIALYSIS SOLUTIONS					
<i>Various dialysis solutions and systems are available and in use. Selection of the most appropriate presentations should be made by specialists.</i>					
24.1	Continuous ambulatory peritoneal dialysis solution (CAPD)	Parenteral solution	Of appropriate composition	4	
24.2	Haemodialysis solution	Parenteral solution	Of appropriate composition	4	
25. MEDICINES for MENTAL and BEHAVIOURAL DISORDERS					
<i>Most medicines in this category may affect performance of skilled tasks and driving. Patients should receive appropriate medicine use counselling.</i>					
25.1 Medicines used in Psychotic disorders					
25.1.1	Aripiprazole ⁴⁸⁵	Tablet	15mg	4	
			5mg	4	
25.1.2	Chlorpromazine	Injection	25mg (as HCl)/mL (2mL amp)	2	
			Tablet	50mg (as HCl) ⁴⁸⁶	2
				100mg (as HCl)	2
25.1.3	Clozapine ⁴⁸⁷	Tablet (scored)	100mg	5	
25.1.4	Flupentixol	Injection (oily, depot)	20mg (as decanoate)/mL (2mL amp)	4	
25.1.5	Fluphenazine	Injection (oily, depot)	25mg (as decanoate) /1mL amp	4	
25.1.6	Haloperidol	Injection	5mg/1mL amp	4	
			Injection (oily)	50mg/1mL amp	4
				Tablet (scored)	5mg

480 Delivering chlorhexidine 4%. Use only for umbilical cord care. Ensure that it is not mistakenly used as an Eye ointment.

481 Management of infants with ductus-dependent cyanotic congenital heart disease.

482 Use for management of pulmonary hypertension in the newborn.

483 Beractant (bovine lung extract) (4mL single-use vial).

484 Poractant alpha (porcine lung phospholipid fraction) (1.5mL vial).

485 Antipsychotic effective for managing psychosis in diabetic patients.

486 For use in elderly patients unable to tolerate 100mg.

487 For use as second-line antipsychotic when other medicines fail.

#	Name of Medicine	Dose-form	Strength / Size	LOU
25.1.7	Midazolam ⁴⁸⁸	Injection (IM)	5mg/mL (3mL amp)	4
25.1.8	Olanzapine ⁴⁸⁹	PFI	10mg	5
		Tablet	10mg	3
			5mg	3
	Tablet (dispersible)	10mg	3	
25.1.9	Paliperidone palmitate ⁴⁹⁰	Injection	75mg/mL	5
			100mg/mL	5
			150mg/mL	5
25.1.10	Quetiapine	Tablet (i/r, scored)	100mg	4
			300mg	4
			200mg	4
		Tablet (e/r)	300mg	4
			200mg	4
25.1.11	Risperidone	Tablet (scored)	2mg	3
25.1.12	Zuclopenthixol	Injection (aqua) ⁴⁹¹	100mg (as acetate)/mL (2mL amp)	4
		Injection (oily, depot) ⁴⁹²	200mg (as decanoate)/1mL amp	4
		Oral drops ⁴⁹³	20mg/mL (20mL)	4
25.2 Medicines used in Mood disorders				
25.2.1 Medicines used in Depressive disorders				
25.2.1.1	Amitriptyline	Tablet	25mg (as HCl)	2
25.2.1.2	Escitalopram ⁴⁹⁴	Tablet	10mg	3
25.2.1.3	Fluoxetine	Tablet (scored)	20mg (as HCl)	3
25.2.1.4	Mirtazapine ⁴⁹⁵	Tablet	15mg	5

488 Use only for management of agitation in acute psychosis.

489 Use only in patients refractory to, or intolerant of, 1st generation antipsychotics.

490 Avoiled through Fee for service for Insurance reimbursement (special request only). Use for management of schizophrenia.

491 Use in short-term management of acute psychoses such as mania or schizophrenia and exacerbation of chronic psychosis; Administered as a single dose followed by zuclopenthixol depot after 24 to 48 hours.

492 Maintenance in schizophrenia and paranoid psychoses; also useful for patients with poor compliance to oral medication

493 Use in treatment of acute schizophrenia and other acute psychoses; severe acute states of agitation; mania in those who are compliant with oral medication. For use in children as well as adults not compliant with injectable form. 1 drop is equivalent to 1mg

494 Use in management of major depressive disorder and generalized anxiety disorder.

495 Use in management of depression complicated by anxiety or trouble sleeping. Does not affect libido; Close monitoring required.

#	Name of Medicine	Dose-form	Strength / Size	LOU
25.2.1.5	Venlafaxine	Tablet	75mg	4
			37.5mg	4
25.2.2 Medicines used in bipolar disorders				
25.2.2.1	Carbamazepin	Tablet (cross-scored)	200mg	2
		Tablet (Controlled Release)	200mg	4
25.2.2.2	Divalproex sodium	Tablet	500mg	4
			750mg	4
25.2.2.3	Lamotrigine	Tablet	25mg	5
			100mg	5
		Tablet, (chewable, dispersible)	25mg	5
25.2.2.4	Lithium carbonate ⁴⁹⁶	Tablet (scored)	400mg	6
		Tablet (m/r)	400mg	6
25.2.2.5	Quetiapine	Tablet (i/r, scored)	100mg	4
			300mg	4
			200mg	4
		Tablet (e/r)	300mg	4
			200mg	4
25.3 Medicines for Anxiety disorders				
25.3.1	Alprazolam	Tablet	0.25mg	3
			0.5mg	3
25.3.2	Bromazepam ⁴⁹⁷	Tablet (scored)	3mg	4
25.3.3	Escitalopram	Tablet	10mg	3
25.3.4	Mirtazapine ⁴⁹⁸	Tablet	15mg	5
25.3.5	Paroxetine	Tablet	20mg	4
25.3.6	Propranolol	Tablet	40mg	3
25.4 Medicines used in obsessive-compulsive disorders				
25.4.1	Clomipramine	Capsule	25mg (as HCl)	4
25.5 Medicines for Disorders due to Psychoactive Substance Abuse <i>These products to be used under close supervision within substance dependency treatment programmes.</i>				
25.5.1	Acamprosate	Tablet	333mg	6

496 RESTRICTED. For use by Specialists with close patient blood level monitoring at Level 6 hospitals.

497 Only use in anxiety with agitation.

498 Require close monitoring.

#	Name of Medicine	Dose-form	Strength / Size	LOU
25.5.2	Vitamin B and C ⁴⁹⁹	Injection (IV)	Pair of amps. (2 x 5mL)	4
25.5.3	Buprenorphine ⁵⁰⁰	Tablet (sublingual)	2mg (as HCl)	4
			8mg (as HCl)	4
25.5.4	Buprenorphine + Naloxone	Tablet (sublingual)	2mg + 500 micrograms (both as HCl)	4
			8mg + 2mg (both as HCl)	4
25.5.5	Bupropion ⁵⁰¹	Tablet	150mg	4
25.5.6	Methadone ⁵⁰²	Oral liquid	5mg/mL (as HCl) (concentrate)	4
25.5.7	Naltrexone	Tablet ⁵⁰³	50mg (as HCl)	4
		Injection (IM, suspension for extended release) ⁵⁰⁴	380mg (as HCl)	4
		Implant ⁵⁰⁵	765mg (as HCl)	6
25.5.8	Nicotine (NRT) ⁵⁰⁶	Chewing gum	2mg	4
			4mg	4
		Transdermal patch ⁵⁰⁷	7-21mg/24 hours	4
25.6 Medicines used in attention deficit hyperactivity disorder (ADHD)				
25.6.1	Atomoxetine	Tablet	10mg	6
25.6.2	Methylphenidate ⁵⁰⁸	Tablet	10mg	4
		Tablet (e/r)	18mg	4
			27mg	5

499 Use in adults and children for rapid therapy of severe depletion/malabsorption of water-soluble vitamins B and C, especially in alcoholism. Contains ascorbic acid 500mg, nicotinamide 160mg, pyridoxine HCl 50mg, riboflavin (as phosphate sodium) 4mg and thiamine HCl 250mcg across the two 5mL amps.

500 RESTRICTED. For use in Medically assisted therapy (MAT) clinics for People who use drugs (PWUDs)

501 Use as smoking cessation aid.

502 RESTRICTED. For use in Medically assisted therapy (MAT) clinics for People who use drugs (PWUDs)

503 Use in management of Opioid dependence and prevention of relapse in Alcohol use disorders.

504 Use for prevention of relapse in Alcohol use disorders. Can be administered by a Nurse.

505 Available through fee for service for insurance reimbursement (special request only). Use only in alcohol rehabilitation treatment.

506 As polacrilex (polacrillin complex).

507 Use as smoking cessation aid.

508 Use should be strictly controlled and actively monitored.

#	Name of Medicine	Dose-form	Strength / Size	LOU
25.7 Medicines for sleep disorders				
25.7.1	Melatonin ⁵⁰⁹	Tablet (dispersible)	4mg	2
			3mg	2
25.7.2	Zolpidem ⁵¹⁰	Tablet	10mg	4
26. MEDICINES acting on the RESPIRATORY TRACT				
26.1 Antiasthmatic medicines and medicines for chronic obstructive pulmonary disease				
26.1.1	Budesonide	Inhalation (aerosol)	100 micrograms/dose (200 dose)	4
			200 micrograms/dose (200 dose)	4
26.1.2	Budesonide + Formoterol	Metered dose inhaler	100 micrograms + 6mg/ metered dose (120 dose)	4
			200 micrograms + 6mg/ metered dose (120 dose)	4
		Dry powder inhaler	80 micrograms + 4.5mcg/ metered dose (120 dose)	4
			160 micrograms + 4.5mcg/ metered dose (120 dose)	4
26.1.3	Epinephrine (adrenaline)	Injection	1mg/1mL amp ⁵¹¹	2
26.1.4	Ipratropium bromide	Inhalation (aerosol)	20 micrograms/metered dose (200 dose)	4
		Nebuliser solution	500 micrograms/2mL unit dose vial (Isotonic)	4
26.1.5	Montelukast	Tablet (chewable)	5mg (as sodium salt) ⁵¹²	4
		Tablet	10mg (as sodium salt)	4
26.1.6	Salbutamol	Nebuliser solution	5mg/mL (as sulphate)	2
26.1.7	Salbutamol + Beclomethasone ⁵¹³	Inhalation (aerosol)	100 micrograms + 50 micrograms	3
26.1.8	Salbutamol + Ipratropium	Nebuliser solution	Salbutamol 2.5mg as sulphate + Ipratropium 500 micrograms as bromide in 2.5mL Amp	3

⁵⁰⁹ Use in management of sleep disorders.

⁵¹⁰ Use in management of sleep disorders.

⁵¹¹ As hydrochloride or hydrogen tartrate. Strength also expressed as 0.1% or 1 in 1,000.

⁵¹² Use in children of age > 2 years for management of allergic rhinitis, exercise-induced asthma.

⁵¹³ Use in management of exacerbation of asthma.

#	Name of Medicine	Dose-form	Strength / Size	LOU
26.1.9	Tiotropium	Powder for inhalation in a Capsule ⁵¹⁴	18 micrograms / Capsule	4
		Metered dose Inhaler	2.5 micrograms per actuation	4
26.2 Medicines for Idiopathic Pulmonary Fibrosis				
26.2.1	Nintedanib	Capsule	150mg	6
26.2.2	Pirfenidone	Tablet	267mg	5
27. EAR, NOSE and THROAT MEDICINES				
27.1 Medicines for the Ear				
27.1.1	Benzocaine + Chlorbutol + Paradichlorobenzene + Turpentine oil	Solution (ear drops)	2.7% + 2% + 5% + 15%	3
27.1.2	Betahistine	Tablet	8mg	5
			16mg	5
27.1.3	Cinnarizine ⁵¹⁵	Tablet	25mg	5
27.1.4	Ciprofloxacin	Solution (ear drops)	0.3% (as HCl)	2
27.1.5	Ciprofloxacin + Dexamethasone	Solution (ear drops)	0.3% (as HCl) + 0.1%	3
27.1.6	Clotrimazole	Solution (ear drops)	1%	3
27.1.7	Hydrogen peroxide ⁵¹⁶	Solution (ear drops)	3% (stabilised)	2
27.2 Medicines for the Nose				
27.2.1	Budesonide	Nasal spray	100 micrograms / metered dose [c]	4
27.2.2	Fluticasone ⁵¹⁷	Nasal spray	27.5 micrograms (as propionate or furoate)	5
27.2.3	Liquid paraffin	Nasal drops	100%	2
27.2.4	Neomycin + Betamethasone ⁵¹⁸	Solution (nasal drops)	0.5% (as sulphate) + (0.1% as sodium phosphate)	4
27.2.5	Sodium chloride	Solution (nasal drops)	0.9%	2
27.2.6	Xylometazoline ⁵¹⁹	Nasal spray	0.05%	4
27.3 Medicines for the Throat and Mouth				
27.3.1	Chlorhexidine ⁵²⁰	Solution (mouthwash)	0.2% (as gluconate/ digluconate)	2

514 This medicine should be procured alongside the administration device. For children, use only in those aged > 12 years.

515 Use in management of Vertigo.

516 Use for inflammatory conditions of the external auditory canal and for removal of ear wax. This 3% strength is also expressed as '10- volume'. If unavailable, use other available forms & strengths and dilute as required to 3% for use as ear drops

517 Use in management of allergic rhinitis.

518 Restricted for nasal use only. Repeated use in an ear with perforated tympanic membrane can cause Sensorineural hearing loss.

519 Short-term anti-decongestant. For acute use only due to potential for rebound congestion. Not for use in not in children aged < 3 months.

520 Use for supportive care of immunocompromised patients.

#	Name of Medicine	Dose-form	Strength / Size	LOU
27.3.2	Lidocaine (Lignocaine) ⁵²¹	Spray	10mg/metered dose (actuation)	4
28. MEDICINES for RHEUMATOLOGY				
28.1 Medicines used to treat Gout				
28.1.1	Allopurinol	Tablet	100mg	4
			300mg	4
28.1.2	Colchicine	Tablet	500 micrograms	4
28.1.3	Febuxostat ⁵²²	Tablet	40mg	5
28.1.4	Probenecid ⁵²³	Tablet	250mg	6
28.2 Disease-modifying agents used in rheumatic disorders (DMARDs) and Immunosuppressants used in Rheumatology <i>Prior to using biologic DMARDs, there is need to screen for TB, HIV and Hepatitis viruses. Where possible, vaccinate prior to use. Biologic DMARDs require cold chain storage and transport.</i>				
28.2.1	Abatacept ⁵²⁴	PFI (IV)	250mg	6
28.2.2	Adalimumab ⁵²⁵	Injection	40mg/0.4mL	6
28.2.3	Azathioprine	Tablet	50mg	4
28.2.4	Baricitinib ⁵²⁶	Tablet	2mg	6
28.2.5	Cyclosporin ⁵²⁷	Capsule	25mg	6
			100mg	6
28.2.6	Etanercept	Injection	25mg vial ⁵²⁸	6
			50mg vial ⁵²⁹	6
28.2.7	Golimumab ⁵³⁰	Injection (solution) (SC)	50mg	6
28.2.8	Hydroxychloroquine ⁵³¹	Tablet	200mg (as sulphate)	4
28.2.9	Infliximab ⁵³²	PFI	100mg	6

521 Use in throat examination.

522 Use in patients with hypersensitivity to Allopurinol, or not achieving uric acid target with Allopurinol. Avoid in patients at risk of heart disease/ with cardiac conditions.

523 Use only in patients with hypersensitivity to Allopurinol. Monitor for uric acid excretion in urine because of risk of urate stones.

524 Indicated for moderately to severely active Rheumatoid arthritis in adults

525 Need to screen for TB, HIV and Hepatitis viruses. Where possible, vaccinate prior to use.

526 Use for moderately to severely active rheumatoid arthritis when patients have had inadequate response to one or more tumour necrosis factor antagonist treatment e.g., with etanercept, adalimumab, infliximab, golimumab.

527 Also known as Ciclosporin

528 Use in management of rheumatoid arthritis, psoriatic arthritis, ankylosing spondylitis, and juvenile idiopathic arthritis. Paediatric strength

529 Use in management of rheumatoid arthritis, psoriatic arthritis, ankylosing spondylitis, and juvenile idiopathic arthritis. adult strength

530 Use in management of rheumatoid arthritis, psoriatic arthritis, axial spondyloarthritis, juvenile idiopathic arthritis.

531 Do not use beyond 5mg/kg body weight. Requires annual eye checkup.

532 Use in management of rheumatoid arthritis, Crohn's disease, vasculitis, psoriatic arthritis, axial spondyloarthritis.

#	Name of Medicine	Dose-form	Strength / Size	LOU
28.2.10	Leflunomide ⁵³³	Tablet	20mg	6
28.2.11	Methotrexate (MTX)	Tablet ⁵³⁴	2.5mg (as sodium salt)	4
		Injection (prefilled syringe) ⁵³⁵	10mg/mL (0.4mL)	4
			25mg/mL (0.4mL)	4
28.2.12	Methylprednisolone	PFI	125mg (as sodium succinate)	4
			500mg (as sodium succinate)	4
28.2.13	Prednisolone	Tablet	5mg	5
			20mg	5
28.2.14	Rituximab ⁵³⁶	Injection (IV)	10mg/mL (10mL vial)	6
			10mg/mL (50mL vial)	6
28.2.15	Sulfasalazine (SSZ)	Tablet	500mg	4
28.2.16	Tocilizumab ⁵³⁷	(Solution for IV infusion)	20mg/mL (4mL vial)	6
		Injection, single use prefilled syringe for subcutaneous injection	162mg/0.9mL	6
28.2.17	Triamcinolone ⁵³⁸	Injection (suspension)	40mg/1mL amp (as acetone or hexacetone)	5
28.3 Medicines for Juvenile joint diseases				
28.3.1	Acetylsalicylic acid (Aspirin) ⁵³⁹	Tablet (scored)	300mg	4
28.3.2	Adalimumab ⁵⁴⁰	Injection	40mg/0.4mL	6
28.3.3	Etanercept ⁵⁴¹	Injection	25mg vial	6
28.3.4	Methotrexate (MTX)	Tablet ⁵⁴²	2.5mg (as sodium salt)	4
		Injection (prefilled syringe) ⁵⁴³	10mg/mL (0.4mL)	4
			25mg/mL (0.4mL)	4

533 Use with caution in women of child-bearing potential. Use only when methotrexate and sulfasalazine cannot be used.

534 Use with caution in women of child-bearing potential.

535 Use with caution in women of child-bearing potential. Use in patients not able to tolerate oral form (due to S/E) or to improve efficacy at higher doses.

536 Use in management of rheumatoid arthritis, Lupus, vasculitis, myositis.

537 Use in management of rheumatoid arthritis, giant cell arthritis.

538 Use for management of severe intractable allergies under supervision of a specialist.

539 Use in treatment of acute or chronic rheumatic fever, juvenile arthritis, Kawasaki disease.

540 Need to screen for TB, HIV and Hepatitis viruses. Where possible, vaccinate prior to use.

541 Use in management of rheumatoid arthritis, psoriatic arthritis, ankylosing spondylitis, and juvenile idiopathic arthritis. Paediatric strength.

542 Use with caution in women of childbearing potential.

543 Use with caution in women of child-bearing potential. Use in patients not able to tolerate oral form (due to S/E) or to improve efficacy at higher doses.

#	Name of Medicine	Dose-form	Strength / Size	LOU
28.3.5	Rituximab ⁵⁴⁴	Injection (IV)	10mg/mL (10mL vial)	6
			10mg/mL (50mL vial)	6
28.3.6	Tocilizumab ⁵⁴⁵	Injection (solution for IV infusion)	20mg/mL (4mL vial)	6
		Injection, single use prefilled syringe for subcutaneous injection	162mg/0.9mL	6
28.3.7	Triamcinolone ⁵⁴⁶	Injection (suspension)	40mg/1mL amp (as acetonide or hexacetonide)	6
29. MEDICINES for OSTEOPOROSIS				
29.1	Alendronate	Tablet	70mg	4
29.2	Zoledronic acid	Injection	5mg (in 100mL)	5
30. MEDICINES for WOUND CARE				
30.1	β-Sitosterol ⁵⁴⁷	Ointment	0.25% w/w (30gm)	2
30.2	Collagenase clostridiopeptidase A + Proteases ⁵⁴⁸	Ointment	1.2 units + 0.24 units (15g)	2
30.3	Distilled water ⁵⁴⁹	Liquid	500mL	2
30.4	Human Epidermal growth factor (recombinant) ⁵⁵⁰	Gel (water-based)	60 micrograms (15g)	4
30.5	Human Platelet derived growth factor (recombinant)	Gel (water-based)	100 micrograms (15g)	4
30.6	Metronidazole ⁵⁵¹	Gel	0.75% or 0.80%	4
30.7	Papain + Urea (Papain-urea topical) ⁵⁵²	Ointment	521,700 IU + 100mg (15g)	4
30.8	Silver ion ⁵⁵³	Solution	0.01% (100mL)	4
			0.01% (250mL)	4
30.9	Silver sulphadiazine ⁵⁵⁴	Cream	1% (50g)	2
			1% (250g)	2

544 Indicated for granulomatosis with polyangiitis and for microscopic polyangiitis.

545 Need to screen for TB, HIV and Hepatitis viruses. Where possible, vaccinate prior to use.

546 Use for management of severe intractable allergies under supervision of a specialist.

547 Management of burns and other superficial wounds e.g., skin ulcers.

548 Use for chemical debridement of wounds.

549 Use for cleaning of wounds.

550 Assists in epithelialisation of wounds and growth of epidermis.

551 Dressing of fungating wounds; minimises odour.

552 Use for enzymatic debridement of large burn wounds.

553 For advanced wound care.

554 Use only in patients aged > 2 months.

#	Name of Medicine	Dose-form	Strength / Size	LOU
30.10	Zinc Hyaluronate (zinc-hyaluronan)	Gel (water-based)	15g	2
31. MEDICINES for correcting WATER, ELECTROLYTE and ACID-BASE DISTURBANCES				
31.1 Oral				
31.1.1	Calcium carbonate ⁵⁵⁵	Tablet	500mg	4
31.1.2	Calcium Carbonate with Vitamin D	Tablet	Minimum Calcium 1000mg/600IU of vitamin D	4
31.1.3	Calcium polystyrene sulphionate ⁵⁵⁶	Powder	15g sachet	4
31.1.4	Magnesium chloride ⁵⁵⁷	Tablet	71.5mg (containing Calcium as carbonate 119mg per Tablet)	4
31.1.5	Oral rehydration salts (ORS)	PFOL (to make 500mL)	Sachet (WHO low-osmolarity formula)	1
31.1.6	Oral rehydration salts + Zinc sulphate	Co-pack (4 sachets + 10 Tablets, (dispersible))	PFOL in sachet to make 500mL + 20mg Tablet [c]	2
31.1.7	Potassium chloride ⁵⁵⁸	Tablet (e/r)	600mg	4
31.1.8	Rehydration solution for malnutrition (ReSoMal)	PFOL (to make 1L)	Sachet (42g) (WHO formula)	4
31.1.9	Sevelamer ⁵⁵⁹	Tablet	400mg	4
			800mg	4
31.1.10	Sodium acid phosphate ⁵⁶⁰	Tablets (effervescent)	1.936g (equiv. to phosphorus 500mg)	4
31.1.11	Sodium chloride	Tablet	600mg	4
31.1.12	Sodium polystyrene sulphionate ⁵⁶¹	Powder	450g	4
31.1.13	Sodium hydrogen carbonate (Sodium bicarbonate) ⁵⁶²	Tablet	1g	5
31.1.14	Tolvaptan ⁵⁶³	Tablet	15mg	5
31.2 Parenteral				
31.2.1	Calcium gluconate ⁵⁶⁴	Injection	100mg/mL (10%) (10mL amp)	4

555 Oral electrolyte supplement.

556 Use for management of hyperkalaemia.

557 Use for oral management of Hypomagnesaemia.

558 Use for oral management of Hypokalaemia.

559 Use for control of serum phosphorus in patients with chronic kidney disease (CKD) who are on dialysis. Sevelamer is available as two salts- Sevelamer hydrochloride and Sevelamer carbonate; both salts are equally efficacious in lowering serum phosphate, but Sevelamer carbonate has a lower risk of causing metabolic acidosis compared to Sevelamer hydrochloride.

560 Use for oral management of Hypophosphatemia.

561 Use to correct water and electrolyte imbalance for hyperkalaemia.

562 Use for oral management of Hyperkalaemia.

563 Use for oral management of Hyponatraemia

564 Use for management of Hypekalaemia

#	Name of Medicine	Dose-form	Strength / Size	LOU
31.2.2	Glucose	Injectable solution	5% (isotonic) (500mL infusion pack)	2
			10% (hypertonic) (500mL infusion pack)	2
			50% (hypertonic) (50mL amp) ⁵⁶⁵	4
31.2.3	Glucose + Sodium chloride ⁵⁶⁶	Injectable solution	5% + 0.9% [c]	2
31.2.4	Potassium acid phosphate	Injection	13.6% w/v sterile aqueous solution	4
31.2.5	Potassium chloride	Injectable solution for dilution	15% (10mL amp) ⁵⁶⁷	4
31.2.6	Sodium chloride	Injectable solution (infusion)	0.45% (hypotonic) (500mL) [in collapsible bottle or Euro cap] ⁵⁶⁸	4
			0.9% (isotonic) (500mL) ⁵⁶⁹	2
			0.9% (isotonic) (100mL)	2
			0.9% (isotonic) (250mL)	2
		Injectable solution	3% (hypertonic) (100mL amp) ⁵⁷⁰	5
31.2.7	Sodium hydrogen carbonate (Sodium bicarbonate)	Injectable solution	8.4% (10mL amp) ⁵⁷¹	2
31.2.8	Sodium lactate compound (Hartmann's /Ringers lactate)	Injectable solution (infusion)	BP formula (500mL) ⁵⁷²	2
31.2.9	Water for injection	Injection	10mL amp	2

565 Use only in dialysis, ICU, and other central line fluids enhancement.

566 Use when patient is dehydrated and not able to eat. Only for use in children.

567 Equivalent to K+ and Cl- 2 mmol/mL.

568 Use for HSS (hypo-osmolar hyperglycaemic state).

569 Equivalent to Na+ and Cl- 15.4 mmol/L.

570 Equivalent to Na+ and HCO₃⁻ 513 mmol/L. Use in bronchiolitis and in hyponatremia in renal conditions.

571 Equivalent to Na+ and HCO₃⁻ 1,000 mmol/L.

572 Equivalent to Na+ 131, K+ 5, Ca²⁺ 2, Cl⁻ 111, HCO₃⁻ (as lactate) 29 mmol/L.

#	Name of Medicine	Dose-form	Strength / Size	LOU
32. VITAMINS and MINERALS				
32.1	Ascorbic acid (Vit C) ⁵⁷³	Tablet	50mg	2
			250mg	2
			1g	2
32.2	Calcitriol (Vit D3) ⁵⁷⁴	Capsule	250 micrograms	4
		Injection	1 microgram/mL (1 mL)	4
32.3	Calcium carbonate ⁵⁷⁵	Tablet (chewable)	1.25g	4
			500mg	4
32.4	Calcium gluconate	Injection	100mg/mL (10%) (10mL amp)	4
32.5	Cholecalciferol (Vit D3)	Oral liquid (drops) ⁵⁷⁶	400 IU/mL [c]	4
		Injection (IM/Oral) ⁵⁷⁷	300,000 IU/1mL amp	4
32.6	Ergocalciferol (Vit D2) ⁵⁷⁸	Oral liquid	250 micrograms (10,000 IU)/mL	4
			250 micrograms (10,000 IU)	4
			1.25mg (50,000 IU)	4
32.7	Niacinamide ⁵⁷⁹	Tablet	500mg	3

573 Management of patients with bleeding gums. Also useful for wound healing, immunity, iron absorption

574 Use for management of Hypocalcaemia in CKD patients undergoing chronic renal dialysis.

575 Equivalent to calcium (elemental) 500mg (Ca²⁺ 12.5 mmol).

576 For management of Rickets in children. Equivalent to 10 micrograms/mL.

577 Use for treatment of rickets. Can be prepared for oral use.

578 Treatment of hypoparathyroidism, refractory rickets (also known as Vitamin D resistant rickets), and familial hypophosphatemia

579 RESTRICTED. Use only for management of Pellagra.

#	Name of Medicine	Dose-form	Strength / Size	LOU
32.8	Omega 3 fatty acids ⁵⁸⁰	Tablet / Capsule	1g	2
		Liquid	250mg to 500mg/100mL (100 to 200mL)	2
32.9	Pyridoxine (Vit B6)	Tablet	25mg (as HCl) ⁵⁸¹	2
		Tablet (scored)	50mg (as HCl) ⁵⁸²	2
32.10	Retinol (Vit A)	Capsule	50,000 IU (as palmitate)	2
			100,000 IU (as palmitate)	2
			200,000 IU (as palmitate)	2
32.11	Thiamine (Vit B1) ⁵⁸³	Tablet	50mg (as HCl)	4
32.12	Vitamins & Minerals Mix ⁵⁸⁴	Powder	1g sachet [c]	2
32.13	Vitamin B12 (Cobalamin)	Tablet ⁵⁸⁵	500 micrograms	3
		Injection	1mg/1mL amp (as HCl, acetate or sulphate)	4

580 Use for treatment of inflammatory conditions. Containing 900mg combined ethyl esters of EPA and DHA per 1g. Intake should not exceed 3 g/day of EPA plus DHA with no more than 2 g/day from dietary supplementation. Use under physician's supervision.

581 Only use in patients with TB patients for management of Isoniazid-induced neuropathy. For Paediatric use

582 Only use in patients with TB patients for management of Isoniazid-induced neuropathy

583 For prevention and treatment of vitamin B1 deficiency

584 For Paediatric use. Also known as Multiple micronutrient powder (MNP). Sachet should contain, at minimum, iron (elemental) 12.5mg (as coated ferrous fumarate), zinc (elemental) 5mg, Vitamin A 300 micrograms, with or without other micronutrients at recommended daily values.

585 Use only in patients who require oral supplementation (e.g., vegetarians) and cannot tolerate injections.

#	Name of Medicine	Dose-form	Strength / Size	LOU
32.14	Zinc sulphate ⁵⁸⁶	Tablet (dispersible)	20mg	2
33. PREPARATIONS for CLINICAL NUTRITION MANAGEMENT				
33.1 Feeds for Special medical purposes				
33.1.1 Parenteral feeds				
33.1.1.1	Amino acids	Solution for IV infusion	21g amino acid + 12g glutamine per 100mL bottle ⁵⁸⁷	4
			5-6% (100ml bottle) [c] ⁵⁸⁸	4
			7% (500ml bottle) ⁵⁸⁹	4
			8% (500ml bottle) ⁵⁹⁰	4
			10% (500ml bottle) ⁵⁹¹	4
33.1.1.2	Combined amino acid and glucose formulation for central administration-two chamber bag for central administration ⁵⁹²	Solution for IV infusion	1 litre	5
33.1.1.3	Combined amino acid, glucose and lipids with medium chain Triglycerides (MCT) / Long chain Triglycerides (LCT) - Three Chamber Bag For Central Administration ⁵⁹³	Solution for IV infusion	1 litre	5
			2 litres	5
33.1.1.4	Combined amino acid, glucose, and lipids with medium chain Triglycerides (MCT) + Long chain Triglycerides (LCT) - three chamber bag for peripheral administration ⁵⁹⁴	Solution for IV infusion	500mL	4
			1 Litre	4
			1,5 litre	4
			2 litres	4
33.1.1.5	Fat (lipid) ⁵⁹⁵	Infusion (emulsion) (IV)	20% (100mL) [c]	4
			20% (500mL)	4

586 Use for wound management.

587 Containing Purely glutamine-based amino acids. For patients on parenteral feeds with metabolic stress such as burns, polytrauma.

588 For specialised use in infants with pancreatic failure and hepatic disease.

589 For use in management of renal failure/disease in adults and children.

590 For use in management of hepatic failure/disease in adults and children

591 For use in management of adult and paediatric patients with increased protein needs

592 For use in management of adult and paediatric patients on parenteral nutrition support.

593 For use in management of pancreatic failure and hepatic disease in both adults and children

594 For use in management of adult and paediatric patients on parenteral nutrition support

595 For patients on parenteral feeds where fat is NOT contraindicated

#	Name of Medicine	Dose-form	Strength / Size	LOU
33.1.1.6	Fat-soluble vitamins	Solution for IV infusion, for infants and children ⁵⁹⁶	10mL [c]	4
		Solution for IV infusion, adults ⁵⁹⁷	10mL	4
33.1.1.7	Trace elements	Solution for IV infusion, Adult ⁵⁹⁸	10mL	4
		Solution for IV infusion, Paediatric ⁵⁹⁹	10mL [c]	4
33.1.1.8	Water-soluble vitamins Containing Vitamin C and B-complex ⁶⁰⁰	Solution for IV infusion	10mL	4
33.1.2 Enteral feeds - liquid formulations				
33.1.2.1	High energy protein fat-free hydrolyzed feed ⁶⁰¹	Liquid	200mL	4
33.1.2.2	Nutritionally complete elemental hepatic formula with MCT for oral / tube feeding ⁶⁰²	Liquid	200mL	4
			500mL	4
33.1.2.3	Nutritionally complete glutamine-enriched liquid formula ⁶⁰³	Liquid	500mL	4
33.1.2.4	Nutritionally complete High energy, high protein oral / tube feed ⁶⁰⁴	Liquid	200mL	4
			500mL	4
33.1.2.5	Nutritionally complete hydrolysed feeds with MCT fibre-free ⁶⁰⁵	Liquid	500mL	4
33.1.2.6	Nutritionally complete hypercaloric liquid formula feed ⁶⁰⁶	Liquid	500mL	4

596 For paediatric patients on parenteral feeds

597 For adult patients on parenteral feeds

598 For use with all adult patients on Parenteral Nutrition. Containing zinc, selenium, copper, chromium, fluoride, manganese, iron, molybdenum, iodide

599 For use with all paediatric patients on Parenteral Nutrition. Containing zinc, selenium, copper, fluoride, manganese, iodide

600 For use in children and adults on parenteral nutrition

601 For management of adult and paediatric patients with pancreatic and hepatic disease, malabsorption, short bowel syndrome (SBS). Contains hydrolyzed protein.

602 For management of adult and paediatric patients with hepatic disease. Requires a gravity set for administration or a pump set where a feeding pump is available.

603 For management of adult and paediatric patients with burns, TB, RVD, cancers, severe head injury, cachexia. Contains protein, glutamine enriched. Requires a gravity set for administration or a pump set where a feeding pump is available.

604 For use in management of adult and paediatric patients with fluid restricted conditions e.g., renal insufficiency / impaired kidney function and those who require high Protein and high energy e.g., patients with burns, HIV, pulmonary TB, or cancers.

605 For management of adult and paediatric patients with malabsorption / short bowel syndrome, hepatic or pancreatic failure. Contains protein and fat. Requires a gravity set for administration or a pump set where a feeding pump is available.

606 For management of adult and paediatric patients with burns, TB, HIV, cancers, severe head injury. Requires a

#	Name of Medicine	Dose-form	Strength / Size	LOU
33.1.2.7	Nutritionally complete, hypocaloric oral / tube feed liquid diet with fibre ⁶⁰⁷	Liquid	200mL	4
			500mL	4
33.1.2.8	Nutritionally complete isocaloric liquid diet with fibre for oral / tube feeding ⁶⁰⁸	Liquid	200mL	4
			500mL	4
			1000mL	4
33.1.2.9	Nutritionally complete isocaloric liquid diet fibre-free for oral / tube feeding ⁶⁰⁹	Liquid	200mL	4
			500mL	4
			1000mL	4
33.1.2.10	Nutritionally complete Iso-caloric paediatric liquid diet for oral / tube feeding ⁶¹⁰	Liquid	200mL	4
			500mL	4
33.1.2.12	Nutritionally complete liquid low sodium formula ⁶¹¹	Liquid	500mL	4
33.1.2.13	Nutritionally complete semi-elemental peptide-based formula for oral / tube feed ⁶¹²	Liquid	200mL	4
			500mL	4
33.1.3 Enteral feeds - powder formulations				
33.1.3.1	Adult nutritionally complete isocaloric formula ⁶¹³	Powder	400g	4
33.1.3.2	Adult nutritionally complete elemental peptide formula ⁶¹⁴	Powder	20 to 30g sachet	4
33.1.3.3	Amino acids and Vitamin granules ⁶¹⁵	Powder	5 to 10g sachet	4
33.1.3.4	High calorie, high protein formula	Powder ⁶¹⁶	200g	4
		Diskettes ⁶¹⁷	200g	4

gravity set for administration or a pump set where a feeding pump is available.

607 For management of adult and paediatric patients with hyperglycaemia/glucose intolerance/metabolic syndrome. Contains fibre, protein, and monounsaturated fatty acids. Requires a gravity set for administration or a pump set where a feeding pump is available.

608 Containing protein. For use in management of severe multiple trauma, major abdominal surgery, burns. For tube feeding. Requires a gravity set for administration or a pump set where a feeding pump is available.

609 For management of adult and paediatric patients requiring fibre modification. Require a gravity set for administration or a pump set where a feeding pump is available.

610 For management of patients with high catabolism. Contains protein. Requires a gravity set for administration or a pump set where a feeding pump is available.

611 For management of adult and paediatric patients with renal disease, chronic cardiac failure, congestive heart disease. Contains protein, fibre, medium chain triglycerides (MCT). Requires a gravity set for administration or a pump set where a feeding pump is available.

612 For management of adult and paediatric patients with malabsorption, short bowel syndrome, pancreatic failure. Requires a gravity set for administration or a pump set where a feeding pump is available.

613 For management of adult patients with lactose or gluten sensitivity, or those on convalescence. Contains protein, fats, carbohydrates.

614 For management of adult patients with malabsorption, short bowel syndrome, pancreatic failure.

615 For adult and paediatric patients with burns, TB, HIV disease, cancers. Contains branched chain amino acids.

616 For adult and paediatric patients on full liquid diet, with dysphagia.

617 For adult and paediatric patients with high calorie or high protein needs.

#	Name of Medicine	Dose-form	Strength / Size	LOU
33.1.3.5	Hepatic formula rich in BCAA ⁶¹⁸	Powder	200g to 500g	4
			Sachet	4
33.1.3.6	Nutritionally complete low glycaemic index formula	Powder	50g sachet	4
33.1.3.7	Paediatric nutritionally complete isocaloric formula ⁶¹⁹	Powder	400g [c]	4
33.1.3.8	Paediatric nutritionally complete peptide-based formula ⁶²⁰	Powder	400g [c]	4
33.1.3.9	Specialized Renal formula ⁶²¹	Powder	400g	4
33.1.3.10	Specialized Semi-elemental peptide formula ⁶²²	Powder	400g	4
33.2 Nutrition Feeds for managing Severe acute malnutrition (SAM) and Moderate acute malnutrition (MAM)				
33.2.1	Fortified Blended Food (FBF)	Flour	415kcal/100g (Sachet) ⁶²³	2
			435kcal/100g (Sachet) ⁶²⁴	2
			450kcal/100g (Sachet) ⁶²⁵	2
			1,000 kcal/250g (Bag or Sachet) ⁶²⁶	2
33.2.2	Ready to use supplemental food (RUSF) ⁶²⁷	Oral paste / bar / liquid / powder	Standard formula (minimum 350 Kcal/100g)	2
33.2.3	Ready to use therapeutic food (RUTF) ⁶²⁸	Oral paste / bar / liquid / powder	Standard formula (minimum 500 Kcal/100g)	2
33.2.4	Therapeutic diet feed (F-75) ⁶²⁹	PFOL (for approx. 600mL)	Standard formula (102.5g sachet)	4
		PFOL	Standard formula (400g tin)	4

618 For management of patients with liver disease. Containing low fat, high biological value (HBV) proteins, branch chain amino acids.

619 For management of paediatric patients on convalescence or picky eaters. Contains protein, fats, carbohydrates.

620 For management of paediatric patients with lactose intolerance or needing growth catch-up.

621 For management of adult and paediatric patients with renal disease.

622 For management of adult and paediatric patients with hepatic and pancreatic failure, GIT disorders.

623 For supplementation in children aged 6 months to 9 years as per criteria in Nutrition & HIV guidelines

624 For supplementation in adults and adolescents (age 10-17 years) as per criteria in Nutrition & HIV guidelines

625 For supplementation in pregnant women and post-partum mothers as per criteria in Nutrition & HIV guidelines

626 For use in supplementary feeding programmes for children and lactating mothers as per criteria in Nutrition guidelines

627 For management of Moderate Acute Malnutrition (MAM)

628 For management of Severe Acute Malnutrition (SAM)

629 Micronutrient-fortified milk powder for reconstitution with water; also known as Formula 75, or Phase 1 (stabilisation phase) Therapeutic milk.

#	Name of Medicine	Dose-form	Strength / Size	LOU
33.2.5	Therapeutic diet feed (F-100) ⁶³⁰	PFOL (for approx. 600mL)	Standard formula (114g sachet)	4
		PFOL	Standard formula (400g tin)	4
34. NUCLEAR MEDICINE (RADIOPHARMACEUTICALS)				
<i>Radiopharmaceutical means pharmaceutical agent that when ready for use contains one or more radioactive isotopes.</i>				
34.1 Diagnostic Radiopharmaceuticals				
34.1.1 Radiopharmaceuticals for planar and single photon emission computed tomography (SPECT) imaging <i>Use in Single photon emission computed tomography (SPECT).</i>				
34.1.1.1	Technetium Tc-99m (99m Tc) Succimer (Technetium Tc-99m Dimercaptosuccinic Acid (DMSA)) ⁶³¹	Injection, prepared from a non-radioactive succimer kit for radiolabelling with 99mTc prior to administration		6
34.1.1.2	Hexamethyl propylene amine oxime (HMPAO) (Technetium-99m exametazime) ⁶³²	Injection, prepared from a non-radioactive exametazime kit for radiolabelling with 99mTc prior to administration		6
34.1.1.3	Iodine -123 (sodium iodide) ⁶³³	Capsule (Oral)	3.7MBq (100uCi)	6
			7.4MBq (200uCi)	6
			14.8MBq (400uCi)	6
34.1.1.4	Iodine 131(sodium iodide) ⁶³⁴	Capsule (Oral)	0.33 MBq (9uCi)	6
			0.61MBq (16.5uCi)	6
			1.11MBq (30uCi)	6
			2.03MBq (55uCi)	6
			3.7MBq (100uCi)	6
34.1.1.5	Mercaptoacetyl triglycine (MAG3) (Technetium -99m mertiatide) ⁶³⁵	Injection, prepared from a non-radioactive betiatide kit for radiolabelling with 99mTc prior to administration		5
34.1.1.6	Methylene diphosphonate (MDP) (Technetium -99m medronate) ⁶³⁶	Injection, prepared from a non-radioactive medronate kit for radiolabeling with 99mTc prior to administration		5

630 Micronutrient-fortified milk powder for reconstitution with water; also known as Formula 100, or Phase 2 (rehabilitation phase) Therapeutic milk.

631 Use in Single photon emission computed tomography (SPECT): for assessing renal morphology, structure, and function.

632 Use in Single photon emission computed tomography (SPECT): for detection of eosinophilic infiltration in eosinophilic gastroenteritis; detection of altered cerebral perfusion in stroke and other cerebrovascular diseases.

633 Use in Single photon emission computed tomography (SPECT): for imaging; Evaluation of thyroid function and/or thyroid morphology.

634 Use in Single photon emission computed tomography (SPECT): for treatment of hyperthyroidism and thyroid cancer; Evaluation of thyroid function and localization of metastatic lesions of thyroid malignancy.

635 Use in Single photon emission computed tomography (SPECT): for evaluating functioning of the kidneys for the diagnosis of renal function abnormalities, renal failure, urinary tract obstruction and renal calculi in adult and paediatric patients.

636 Use in Single photon emission computed tomography (SPECT): for skeletal imaging to localize altered osteogenesis.

#	Name of Medicine	Dose-form	Strength / Size	LOU
34.1.1.7	Molybdenum-99 / Technetium-99m radionuclide generator ⁶³⁷	Radionuclide generator	1, 2, 2.5, 3, 4, 4.5, 5, 6, 7.5, 10, 12.5, 15, 18, 20 Ci of ⁹⁹ Mo	5
34.1.1.8	Sesta methoxyisobutylisonitrile (sestamibi) (Technetium -99m Sestamibi) ⁶³⁸	Injection, prepared from a non-radioactive sestamibi kit for radiolabelling with ^{99m} Tc prior to administration		5
34.1.1.9	Technetium - 99m disofenin (DISIDA) ⁶³⁹	Injection, prepared from a non-radioactive disofenin kit for radiolabelling with ^{99m} Tc prior to administration		6
34.1.1.10	Technetium - 99m leucocytes ⁶⁴⁰	Injection		6
34.1.1.11	Technetium - 99m mebrofenin (BRIDA) ⁶⁴¹	Injection, prepared from a non-radioactive mebrofenin kit for radiolabelling with ^{99m} Tc prior to administration		5
34.1.1.12	Technetium-99m pentetate (DTPA) ⁶⁴²	Injection, Inhalation, prepared from a non-radioactive pentetate kit for radiolabelling with ^{99m} Tc prior to administration		6
34.1.1.13	Technetium-99m sodium pertechnetate ⁶⁴³	Injection, eluted from approved ⁹⁹ Mo/ ^{99m} Tc radionuclide generator		6
34.1.1.14	Technetium-99m sodium pertechnetate	Precursor radiopharmaceutical, eluted from approved ⁹⁹ Mo/ ^{99m} Tc radionuclide generator		6
34.1.2 Radiopharmaceuticals for Positron emission tomography (PET) <i>Use in Positron emission tomography (PET).</i>				
34.1.2.1	[Fluorine-18] Prostate Specific Membrane Antigen (PSMA) 1007			6
34.1.2.2	Fluorodeoxyglucose (FDG) (Fluorine -18)	Injection	0.74 – 11.1 GBq (20 – 300 mCi/mL)	5

637 Use in Single photon emission computed tomography (SPECT) as a source of sodium pertechnetate Tc ^{99m} to be used in the preparation of approved ^{99m}Tc radiopharmaceuticals.

638 For use in Single photon emission computed tomography (SPECT): for myocardial perfusion scintigraphy; identification of parathyroid adenomas; radio-guided surgery of the parathyroid; scintimammography; Myocardial perfusion imaging and localization of sites of myocardial ischemia and myocardial infarction. Planar breast imaging as second line diagnostic method for abnormal breast lesions on mammography and in patients with palpable breast masses.

639 Use for hepatobiliary imaging for the diagnosis of acute cholecystitis or to rule out acute cholecystitis in suspected cases.

640 Use as an adjunct in the localization of intraabdominal infection and inflammatory bowel disease.

641 Use for hepatobiliary imaging.

642 Brain imaging in adults, renal imaging, and lung ventilation imaging in adult and paediatric patients.

643 Use for Vesicoureteral imaging, thyroid gland imaging, salivary gland imaging and imaging of the nasolacrimal drainage system.

#	Name of Medicine	Dose-form	Strength / Size	LOU
34.1.2.3	Gallium-68 oxodotreotide (dotatate)	Injection	40 micrograms of oxodotreotide kit for radiolabeling with up to 1110 MBq (30 mCi) of [⁶⁸ Ga]GaCl ₂	6
34.1.2.4	Germanium-68 - Gallium-68 radionuclide generator	Radionuclide generator	0.74 – 1.85 GBq	6
34.2 Therapeutic Radiopharmaceuticals				
34.2.1	[Iodine-131] sodium iodide	Oral solution	5 mCi/mL	6
			25 mCi/mL	6
34.2.2	Lutetium-177 oxodotreotide (dotatate)	Injection	370 MBq/mL (10 mCi/mL)	6
35. MEDICINES for BENIGN PROSTATIC HYPERPLASIA (BPH)				
35.1	Finasteride	Tablet	5mg	4
35.2	Tamsulosin	Capsule	400 micrograms (as HCl)	4

Appendix 1: List of Additions to KEML 2023

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
1.1.2.2	Etomidate	Injection	2mg/mL (10mL vial)	For anaesthetic induction in high-risk cardiac surgery patients due to its hemodynamic stability. This includes patient with cardiac disease for non-cardiac surgery and patients with cardiac disease for cardiac surgery.
1.1.2.3	Fentanyl	Injection	50 micrograms/mL (2ml amp)	Added in subsection in addition to listing in 1.3
1.2.3	Lignocaine	Topical spray	4% (as HCl)	Expanded strength range due to unavailability of lower strengths in the market
			10% (as HCl)	
1.3.3	Ephedrine	Injection	30mg	Reclassified from 1.2 – Local anaesthetics
1.3.4	Epinephrine (adrenaline)	Injection	1mg (as sodium phosphate)/1mL amp	Listed in this section in addition to section 4, 14 and 26
1.3.7	Midazolam	Injection	5mg (as HCl)/mL (3mL amp)	Different strength added for intensive care unit (ICU) sedation for infusion; The 5mg/ml amp is cheaper and more convenient and safer to administer for the nurses compared to breaking many ampoules of the 1mg/ml amp.
1.3.8	Morphine (Preservative Free)	Injection	10mg/mL (1mL amp) Preservative free	Added different formulation as Adjunct for Spinal and epidural anaesthesia
1.3.9	Ondansetron	Injection	2mg/mL (2mL amp)	Added to this section; Antiemetic used for at risk patients
1.3.10	Phenylephrine	Injection	10mg/mL Hydrochloride 1mL	Reclassified from 1.2 – Local anaesthetics
2.1.3	Rocuronium	Injection	10mg/mL, (as bromide), 5mL vial	Has minimal side effects, is shorter acting and reversible compared to other listed medicines in same class.
2.2.2	Pyridostigmine	Injection	5mg/mL, 2mL amp	Added in addition to the Tablet
		Oral Solution	60mg/5mL, 240mL	Added for ease of dosing for paediatric patients

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
3.1.3	Dexketoprofen	Injection	25mg/mL (2mL amp)	Use in management of moderate to severe pain, intra-op and post-op pain; Oral formulation listed in KEML 2019
3.2.3	Methadone	Tablet	5mg	Alternative to morphine
		Oral Solution	1mg/mL	Alternative to morphine
3.2.5	Oxycodone	Tablet	5mg	Alternative to morphine
3.2.6	Tramadol	Capsule	50mg	Useful for mixed neuropathic and nociceptive pain; useful for management of moderate to severe pain. It causes less sedation and respiratory depression as compared to typical opioids like morphine.
		Injection	50mg/mL(2mL amp)	
3.3.3	Carbamazepine	Tablet	200mg	adjunct in management of trigeminal neuralgia
3.3.12	Midazolam	Injection	1mg/mL, 5 mL	Use for delirium and terminal restlessness.
3.3.15	Pregabalin	Capsule	25mg	Use in the management of neuropathic pain, Diabetic neuropathy, and post-herpetic neuralgia
			75mg	
3.3.16	Senna	Tablet	7.5mg	Control of constipation, a common side effects of opioids.
4.1	Cetirizine	Tablet	10mg	cheaper alternative to Loratadine. Less sedation than Chlorpheniramine
		Oral liquid	1mg/mL	
4.4	Diphenhydramine	Injection	50mg/mL	Use for allergic reactions and status migrainosus.
5.2.5	Deferasirox	Tablet	400mg	Add the 400mg Strength
6.1	Acetazolamide	Tablet	250mg	For management of absence seizures
			500mg	
6.3	Clobazam	Tablet	10mg (scored)	Listed in treatment guidelines for management of epilepsy
6.4	Clonazepam	Tablet	0.5mg	
			2mg	
6.6	Gabapentin	Tablet	100mg	Additional Strength

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
6.8	Levetiracetam	Oral solution	100mg/mL	Ease of dosing for paediatric patients
6.12	Oxcarbazepine	SODF	150mg	Recommended to shift from Carbamazepine to Oxcarbazepine based on less side effect profile of the latter.
			300mg	
6.15	Pregabalin	Capsule	25mg 75mg	Listed in treatment guidelines for management of epilepsy
6.16	Topiramate	Tablet	25mg 50mg	
6.17	Valproic acid (Sodium Valproate)	Tablet (Crushable)	100mg	For age group between 1 year and 6years, syrup causes dental caries To cater for the age group that may need more volume of syrup but cannot swallow the enteric coated Tablets.
7.1.2.1	Albendazole	Suspension	100 mg/5 mL	Added in this section for easy of dosing
7.2.1.2	Amoxicillin	PFOL	125mg/5mL ((as trihydrate) 250mg/5mL ((as trihydrate)	Added for Ease of dosing
7.2.1.3	Amoxicillin + clavulanic acid	PFOL	200mg (as trihydrate) + 28mg (as potassium salt) / 5mL 125mg (as trihydrate) + 31.25mg (as potassium salt)/5mL 250 mg (as trihydrate) + 62.5 mg (as potassium salt)/5mL	Added for Ease of dosing
7.2.1.7	Cefalexin	PFOL Capsule	125mg/5ml 250mg	For MSSA, Soft tissue infections, affordable
7.2.1.8	Cefazolin	PFI	500mg (as sodium salt) in vial	Ease of dosing
7.2.1.10	Flucloxacillin	Capsule	500mg (as sodium salt)	Ease of dosing

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
7.2.2.3	Cefotaxime	Powder for Injection	500mg	For management of severe neonatal sepsis and in place of Ceftriaxone in obviously Jaundiced children. Cefotaxime is a safer cephalosporin in the first 7 days of life.
			1gm	
7.2.2.6	Cefuroxime	PFI	750mg	Alternative to cefazolin as surgical prophylaxis
7.2.2.7	Ciprofloxacin	Injection	400mg	As an option in management of HAP; VAP
7.2.2.11	Erythromycin	Tablet	500mg	Option in URTI management
7.2.3.1	Ceftazidime + avibactam	PFI	2000+500mg	For management of extensively resistant gram-negative pathogens
7.2.4.2	Dapsone	Tablet	25mg	Ease of dosing
7.2.5.1.2	Isoniazid (H)	Injection	100mg/mL	For patients unable to take the oral formulation
7.2.5.1.4	Rifampicin (R)	Powder for Injection	600mg	
7.2.5.2.4	Rifapentine + Isoniazid (3HP)	Tablet	300mg+300mg	FDC recommended. Rifapentine single agent deleted
7.2.5.3.14	Pretomanid	Tablet	200mg	For management of MDR TB in combination with other medicines
7.3.1	Amphotericin B	Injection	(Liposomal) 50mg vial	Included in section in addition to deoxycholate; has lower levels of Nephrotoxicity
7.3.4	Flucytosine	Injection	2.5g/250ml	For management of Cryptococcal meningitis, Added Injection form
7.3.8	Posaconazole	Tablet (Delayed Release)	100mg	For prophylaxis of Aspergillus and Candida infections in patients who are at high risk due to being severely immunocompromised e.g., hematologic malignancies patients with prolonged neutropenia due to chemotherapy; Also, for management of Mucormycosis as an alternative to amphotericin B.
		Injection	18mg/mL (300mg/16.7mL)	

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
7.3.9	Terbinafine	Tablet	250mg	Strength added for ease of dosing
7.3.10	Voriconazole	Tablet	200mg	Oral formulation added as First line for invasive Aspergillosis is
7.4.2.1.1	Abacavir (ABC)	Oral Solution	20 mg/mL	Added for easy of dosing
7.4.2.1.3	Tenofovir Alafenamide (TAF)	Tablet	25mg	Added as has less toxicity than TDF. Preferably to be used in FDC.
7.4.2.2.1	Dapivirine	vaginal ring,	25mg	Used in Open-label extension studies ASPIRE and REACH (MTN-034) as pre-exposure prophylaxis for HIV
7.4.2.3.3	Darunavir + Ritonavir (DRV+r)	Tablet	600mg + 100mg	Required in new ART guidelines
			800mg + 100mg	
7.4.2.3.4	Lopinavir + ritonavir (LPV/r)	Granules (In Sachet)	40mg +10mg	Listed in ART Guidelines; Listed to replace pellets
7.4.2.4.1	Cabotegravir	Injection (Long acting), Single-dose vial	600mg/3 mL	To be used for in-country implementation studies for pre-exposure prophylaxis for HIV
7.4.2.4.2	Dolutegravir (DTG)	Tablet	10mg	Added strength to align to National HIV Prevention and Treatment Guideline 2022 recommendation of using NVP for up to 4 weeks and then switching to pDTG.
		Tablet, Dispersible	10mg	For use in children weighing less than 20kg.
7.4.2.5.4	Tenofovir Alafenamide + Lamivudine +Dolutegravir (TAF+3TC+DTG)	Tablet	25mg + 300mg + 50mg	Recommendation to move from TDF to TAF FDC
7.4.3.3	Valgancyclovir	PFOL	50mg/mL	Formulation added for ease of Paediatric dosing for CMV infection
7.4.4.1.1.3	Tenofovir Alafenamide (TAF)	Tablet	25mg	Added in section in addition to TDF due to safer toxicity profile
7.4.4.2.2.1	Sofosbuvir + Velpatasvir	Tablet	400mg+100mg	Included as pangenotypic regimen.
7.5.1.4	Tinidazole	Tablet (f/c)	250mg	Added for ease of dosing

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
7.5.3.1.3	Artesunate	Suppository	100mg	Rectal artesunate is the recommended pre-referral treatment for severe P. falciparum malaria.
8.1.3	Paracetamol	Oral liquid	120mg/5mL[c]	Included for management of migraine in paediatrics
8.1.4	Sumatriptan	Tablet	25mg	Selected as class representative for acute management of migraines.
			50mg	
8.2.2	Topiramate	Tablet	25 mg	For prophylaxis of migraine in adult patients who have a contraindication for Propranolol.
			50mg	
9.1.1	Antithymocyte globulin (ATG) (Equine)	Injection	50mg/mL, 5 mL Vial	Replaced ATG Rabbit listed in KEML 2019
9.2.1.4	Cabazitaxel	Injection	60mg	For management of prostate cancer
9.2.1.15	Docetaxel	Injection (premixed)	120mg vial	Replaced 20mg; for ease of dosing
9.2.1.25	Liposomal Doxorubicin (Pegylated)	Solution for Injection	50mg vial	Cost effective strength; listed in addition to 20mg
9.2.1.28	Mitomycin C	Injection	10mg	For management of bladder cancer and anal cancer
9.2.1.31	Pegaspargase	Injection	3750 Units/5mL in Vial	For management of acute lymphoblastic leukaemia. See listing for detailed indication.
9.2.1.32	Pemetrexed	PFI or solution for Injection	500mg	For management of metastatic or locally advanced non-small cell lung cancer
9.2.1.34	Temozolomide	capsule	100mg	For management of Glioblastoma multiforme and melanoma
			20mg	
9.2.2.2	Bevacizumab	Injection	100mg	For management of Colorectal cancer, cervical cancer glioblastoma, Renal cell carcinoma and hepatocellular carcinoma among other cancers
			400mg	
9.2.2.5	Ibrutinib	capsule	140mg	Treatment of Chronic Lymphocytic leukaemia

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
9.2.2.8	Osimertinib	Tablet	80mg	Use in epidermal growth factor receptor mutated Lung cancer as second line therapy.
9.2.2.9	Palbociclib	Tablet	125mg	Hormone positive metastatic breast cancer
			100mg	
			75mg	
9.2.2.10	Pazopanib	Tablet	200mg	Use in sarcoma, Renal Cell Carcinoma.
			400mg	
9.2.2.12	Sorafenib	capsule	200mg	For management of hepatocellular carcinoma and thyroid cancer
9.2.2.13	Trastuzumab (Subcutaneous)	Injection (Solution for subcutaneous Injection)	600mg	Added formulation for ease of administration when indicated in breast cancer management
9.2.3.3	Peg-Filgrastim	Injection (prefilled syringe)	6mg/0.6mL	For prevention of chemotherapy induced neutropenia
9.2.4.7	Letrozole	Tablet	2.5mg	Alternative to anastrozole
9.2.4.9	Octreotide	Injection kit	20mg	Management of carcinoid tumours
9.2.4.10	Prednisolone	Tablet	20mg	Additional strength to reduce number of Tablets to be swallowed and ease of dosing
9.2.5.2	Febuxostat	Tablet	40mg	Management of hyperuricemia
9.2.5.3	Magnesium Sulphate	Injection	4% (100mL vial)	For prevention of cisplatin induced nephrotoxicity
9.2.5.4	Mannitol	Solution for Infusion	20%, 500mL	
9.2.5.7	Sodium hydrogen carbonate (Sodium bicarbonate)	Injectable solution	8.4% (10mL amp)	Used for urine alkalization for patients on high dose methotrexate.
10.2	Biperiden	Injection	5mg (lactate) in 1 mL ampoule.	Anti-parkinsonism agent. It is effective in managing antipsychotic induced extrapyramidal side effects /symptoms. The availability of injectable form comes in as an advantage in emergencies or when oral administration is not possible.
		Tablet	2mg (hydrochloride)	

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
11.3	Rivastigmine	Capsule	1.5mg	Used for management of neurocognitive disorders - Dementia and Parkinsons disease.
12.1.1	Darbepoetin alfa	Injection	25 micrograms for subcutaneous Injection	Added as a long-acting erythropoiesis stimulating agent with extended dosing intervals
			40 micrograms for subcutaneous Injection	
12.2.2.4	Warfarin	Tablet (scored)	3mg (as sodium salt)	Strength added to allow for dosing adjustments
13.1.1	Cryoprecipitate			Use in management of PPH, trauma and massive transfusion protocols
13.2.2.1	Coagulation factor VIII	PFI (Extended half-life)	2,000 IU vial	Strength added for ease of dosing
13.3.1	Dextran 70	Solution	6%	Alternative to polygeline
14.1.1	Bisoprolol	Tablet	2.5mg	Added 2.5mg because it is available in the market; Replaces 1.25mg
14.1.2	Carvedilol	Tablet	3.125mg	Added for ease of dosing and to minimize medication errors.
			25mg	
14.1.3	Glyceryl trinitrate	Spray (sublingual)	400micrograms / dose	Added to allow for dose titration
14.1.4	Isosorbide dinitrate	Tablet (Sublingual)	5mg	
14.2.3	Atropine	Injection	1mg (as sulphate)/1mL amp	For resuscitation in symptomatic sinus bradycardia
14.2.4	Bisoprolol	Tablet	2.5mg	Replace 1.25mg
14.2.5	Carvedilol	Tablet	3.125mg	Added for ease of dosing and to minimize medication errors.
			25mg	
14.2.6	Digoxin	Tablet	125 micrograms	Commonly used strength: Some of the 250 micrograms in the market are not scored therefore difficult to use.
14.2.7	Epinephrine (adrenaline)	Injection	1mg (as sodium phosphate)/1mL amp	For resuscitation
14.2.8	Lignocaine Preservative free	Injection	200mg/10mL	Used an antiarrhythmic for shockable cardiac arrest rhythms. Emergency drug in acute care settings

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
14.2.9	Verapamil	Tablet (Sustained release)	120mg	Added 120mg because dose range is 120 mg-240mg for SR
14.3.1.1	Enalapril	Tablet	20mg (as hydrogen maleate)	For ease of dosing and to reduce pill burden
14.3.2.2	Telmisartan	Tablet	80mg	Added to allow for dose escalation and reduce pill bill.
14.3.3.1	Bisoprolol	Tablet	2.5mg	Replaces 1.25mg
14.3.3.2	Labetalol	Tablet	100mg	For management of hypertension in pregnancy
			200mg	
14.3.3.3	Metoprolol	Tablet (Extended release)	25mg	Alternative beta blocker
			50mg	
14.3.3.4	Nebivolol	Tablet	2.5mg	
			5mg	
14.3.4.1	Amlodipine	Tablet	10mg	Added 10mg strength due to dose titration and to reduce pill burden
14.3.5.1	Chlorthalidone	Tablet	12.5mg	Alternative thiazide like diuretic
14.3.5.3	Indapamide	Tablet	1.5mg	
14.3.6.1.1	Methyldopa	Tablet	500mg	Strength added to reduce pill burden
14.3.6.4.2	Prazosin	Capsule	500micrograms	For ease of dose escalation
14.3.6.6.1	Bosentan	Tablet	62.5mg	Use for management of pulmonary arterial hypertension
14.3.6.6.3	Tadalafil	Tablet	20mg	
14.3.7.2	Amlodipine + Indapamide	Tablet	5mg + 1.25mg	Different strengths and molecules of FDC added to reduce pill burden and improve adherence to treatment
14.3.7.8	Telmisartan+ Amlodipine+ Hydrochlorothiazide	Tablet	40mg + 5mg+12.5mg	
14.3.7.5	Perindopril + Amlodipine	Tablet	5mg + 5mg	
			5mg + 10mg	
14.3.7.6	Perindopril + Amlodipine + Indapamide	Tablet (Film-coated)	5mg + 5mg + 1.25mg	
			10mg + 10mg + 2.5mg	
14.4.1	Bisoprolol	Tablet	2.5mg	Replaces 1.25mg

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
14.4.6	Empagliflozin	Tablet	10mg	Reduces the combined risk of cardiovascular death or hospitalization for heart failure in patients with heart failure and a preserved ejection fraction, regardless of the presence or absence of diabetes.
14.4.8	Eplerenone	Tablet	25mg	Alternative to Spironolactone
14.4.14	Metolazone	Tablet	5mg	For management of oedema in patients with heart failure
14.4.20	Torsemide	Tablet (scored)	10mg	For ease of dosing
14.5.1.3	Acetylsalicylic acid (Aspirin) + Clopidogrel	Tablet	75mg+75mg	Combination antiplatelet
14.5.2.1	Alteplase	PFI	50mg	Alternative to Tenecteplase; Cost effective and readily available
			100mg	
14.5.2.2	Retepase	PFI	10Units	
14.6.1	Atorvastatin	Tablet	80mg	Ease of dosing and to reduce pill burden
15.2.3	Silver sulphadiazine	Cream	1% (250g)	Size added for hospital use in addition to the 50g listed
15.4.5	Tretinoin	Cream	0.05%	First line treatment for mild to moderate Acne vulgaris
18.5	Metolazone	Tablet	5mg	Alternative diuretic
18.7	Torsemide	Tablet	10mg	
			20mg	
19.1.3	Pantoprazole	Dispersible Tablet	20mg	Added as has less pharmacokinetic interaction with other medications.
		Capsule	20mg	
		PFI	40mg	
19.2.1	Dexamethasone	Tablet	2mg	Add all strengths and formulations listed in this section in addition to the 4mg Tablet listed on KEML 2019
			0.5mg	
		Injection	4mg/mL in 1mL amp as disodium phosphate salt	
19.2.7	Palonosetron	Injection	0.05mg/mL in 5mL vial	For prevention of Chemotherapy induced nausea caused by highly emetogenic chemotherapy drugs in combination with other medicines

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
19.3.1	Mesalazine	Suppository	1g	Formulation listed in addition to oral formulation
		Enema	4g/60mL	
19.7.1	Propranolol	Tablet	20mg	For use in management of portal hypertension and varices
			40mg	
19.7.2	Spironolactone	Tablet	25mg	For management of ascites in cirrhosis
			100mg	
20.1.2	Hydrocortisone	Injection	100mg/vial	Injection hydrocortisone in addition to listed formulation
20.5.1.2	Insulin long acting, Detemir	Injection	100IU/mL in (10mL vial)	Detemir listed in addition to glargine
			100 IU/mL (3 mL cartridge or prefilled pen)	
20.5.1.3	Insulin, Long-acting (basal) (human) [Glargine]	Injection	100 IU/mL (3 mL cartridge or prefilled pen)	Insulin Pens added for ease of use and to improve adherence to treatment.
20.5.1.4	Insulin, Premixed (Short acting + Intermediate acting) NPH + Regular	Injection	100 IU/mL (3 mL prefilled pen)	
20.5.1.5	Insulin, Premixed (Ultra short acting + Intermediate acting)	Injection	100 IU/mL (3 mL prefilled pen)	
20.5.1.6	Insulin, Short acting (Soluble) (regular)	Injection	100IU/mL (3mL penfill)	
20.5.1.7	Insulin, ultra short-acting (Rapid) (Insulin Lispro and Aspart)	Injection	100IU/m (3mL prefilled pen)	
20.5.2.1.1	Gliclazide	Tablet (m/r)	60mg	To reduce pill burden; Listed in addition to 30mg (m/r) and 40mg (i/r)
		Tablet (i/r)	80mg	
20.5.2.2.1	Metformin	Tablet	850mg (as HCl)	Added for ease of dosing
			1gm (as HCl)	
20.5.2.3.1	Pioglitazone	Tablet	30mg	Added for ease of dosing and to reduce pill burden
20.5.2.4.2	Sitagliptin	Tablet	100mg	Added for ease of dosing and to reduce pill burden

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
20.5.2.4.1	Linagliptin	Tablet (f/c)	5mg	Alternative to sitagliptin - No dose adjustment in CKD required and ideal in set-up where frequent monitoring of creatinine clearance is not feasible
20.5.2.5.1	Empagliflozin	Tablet	25mg	Strength added for ease of dosing
20.5.2.6.1	Empagliflozin + Metformin	Tablet	12.5mg + 500mg	FDC included to reduce pill burden and lead to better adherence
			12.5mg + 1000mg	
			5mg + 500mg	
			5mg + 1000mg	
20.5.2.6.2	Pioglitazone + Metformin	Tablet	15mg + 500mg	
			15mg + 850mg	
20.5.2.6.3	Sitagliptin + Metformin	Tablet	50mg + 500mg	
			50mg + 850mg	
			50mg + 1000mg	
20.6.2	Glucagon	Injection	1mg/mL	For management of hypoglycaemic coma of longer duration.
20.7.1	Carbimazole	Tablet	10mg	Strength added to reduce pill burden and improve adherence
20.8.1	Calcitriol (Vit D ₃)	Capsule	250 micrograms	Added in new subsection on medicines for management of hyperparathyroidism in addition to listing under vitamins Section 32
		Injection	1 microgram/mL (1 mL)	
20.8.2	Cinacalcet	Tablet	30mg	For use either alone or in combination with calcitriol for the management of secondary hyperparathyroidism
20.9.2	Desmopressin	Injection	4 micrograms/mL	Used in management of acute central diabetes insipidus.
		Nasal spray	10micrograms/spray	
20.9.3	Somatropin (recombinant human growth hormone)	Prefilled pen	12mg	Used in management of hypoglycaemia due to growth hormone deficiency.
22.1.2	Dexamethasone + Polymixin B sulphate + Neomycin sulphate	Ointment	1 mg dexamethasone, 6000 IU polymixin B sulphate, 3500 IU neomycin sulphate	For use post-op after cataract surgery

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
22.1.6	Moxifloxacin	Eye drops	0.5% (as HCL)	For management of ophthalmic conditions where indicated
22.1.9	Ofloxacin + Dexamethasone	Eye drops	0.3 + 0.1%	
22.1.11	Tobramycin	Eye drops	0.3% (as sulphate)	
22.1.12	Tobramycin + Dexamethasone	Eye drops	0.3 + 0.1%	
22.1.13	Voriconazole	Eye drops	1% (as HCL)	
22.2.1	Dexamethasone	Eye drops	0.1%	
22.3.1	Lignocaine	Injectable	2% (as HCL)	Local Anaesthesia used during Ocular surgery
22.3.2	Lignocaine + Epinephrine (Adrenaline)	Injectable	Lignocaine 2% and Adrenaline 1:100,000 or 1:200,000 (as HCL)	
22.3.3	Proparacaine	Eye drops	0.5% (as HCL)	Topical anaesthesia for ophthalmic use; Also used for Phacoemulsification.
22.4.2	Bimatoprost	Eye drops	0.01% 0.03%	Alternative to latanoprost; has advantage of not requiring refrigeration
22.4.3	Bimatoprost + Timolol	Eye drops	Bimatoprost 0.03% + Timolol 0.5%	2 molecules result in better in control. Combined eyedrops as compared to using 2 bottles
22.4.4	Brimonidine + Timolol	Eye drops	Brimonidine 0.2% + Timolol 0.5%	The 2 components decrease elevated intraocular pressure (IOP) by complementary mechanisms of action and the combined effect results in additional IOP reduction compared to either compound administered alone. It is also important for patients who have side effects from Prostaglandin analogues (Bimatoprost and Latanoprost)

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
22.4.7	Pilocarpine	(Solution) eye drops	1%	Dosing requires different strengths e.g., pilocarpine naive patients should be initiated treatment with 1% solution.
			2%	
		Injection	0.5% (as nitrate), Vial	For intraocular use for miosis during glaucoma or cataract surgery.
22.5.2	Cyclopentolate	Eye drops	1%	Cyclopentolate is more effective in children examination than atropine because it is short acting
22.6.1	Aflibercept	Injection	0.05mL (2mg vial)	Delivers long-lasting anti-VEGF activity, therefore it is given 3 monthly. Works by blocking all VEGFR-1 ligands, including VEGF and PGF ₁ , allowing it to be used where Ranibizumab and Bevacizumab are not effective. It also has better efficacy when vision is worse.
22.6.3	Ranibizumab	Injection	10mg/mL (0.5mg vial)	Ophthalmic preparations available, packaged in single vials per Injection, giving it a better safety profile/ lower risk of cluster endophthalmitis compared to bevacizumab.
			6mg/mL (0.3mg vial)	
22.7.2	Olopatadine	Eye drops	0.2% (HCl)	Used for allergic conjunctivitis
			0.1% (HCl)	
22.8.3	Polyacrylic acid	Eye Gel	0.2%	Used for dry eye syndrome
22.8.4	Riboflavin	Solution (Eye drops)	0.1% with Dextran	Used for corneal crosslinking to prevent progression of corneal ectasia such as Keratoconus
			0.1% without Dextran	
22.8.5	Sodium Hyaluronate	Eye drops	1% (perseverative free)	Used for dry eye syndrome
22.8.6	Trypan blue	Intracameral Solution	0%	For cataract surgery rhexis use.
23.6.1.2	Carboprost	Injection	250 micrograms / mL (as tromethamine)	Uterotonic indicated as third line treatment
23.7.2	Terbutaline	Injection	0.5mg/mL	Alternative to salbutamol as tocolytic
23.9.1	Caffeine citrate	Sterile solution for IV or oral use	10mg/mL [c]	For ease of dosing

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
25.1.1	Aripiprazole	Tablet	5mg	Additional strength for ease of dosing and to improve adherence
25.1.8	Olanzapine	Tablet	5mg	Added to facilitate dosing in addition to 10mg already listed as the tablets are film coated
25.1.10	Quetiapine	Tablet (e/r)	200mg	Additional strength for ease of dosing and to improve adherence
		Tablet (i/r, scored)	200mg	
25.2.1.5	Venlafaxine	Tablet	75mg	For management of depressive disorders
			37.5mg	
25.2.2.1	Carbamazepine	Tablet (Controlled Release)	200mg	Controlled release formulation added to improve outcomes and adherence
25.2.2.3	Lamotrigine	Tablet	25mg	Listed in addition to section 6
			100mg	
			25mg (chewable, dispersible)	
25.2.2.5	Quetiapine	Tablet (e/r)	200mg	Additional strength for ease of dosing and to improve adherence
		Tablet (i/r, scored)	200mg	
25.3.1	Alprazolam	Tablet	0.25mg	For management of anxiety disorders
			0.5mg	
25.3.5	Paroxetine	Tablet	20mg	
25.3.6	Propranolol	Tablet	40mg	For management of physical symptoms of anxiety
25.5.1	Acamprosate	Tablet	333mg	For management of acute symptoms of alcohol withdrawal.
25.6.1	Atomoxetine	Tablet	10mg	For management of attention deficit hyperactivity disorder (ADHD) especially in children
25.6.2	Methylphenidate	Tablet (e/r)	27mg	additional strength for older children
25.7.1	Melatonin	Tablet (soluble)	3mg	Available strength
26.1.9	Tiotropium	Metered dose Inhaler (MDI)	2.5 micrograms per actuation	MDI is easier to use and can be used with a spacer.
26.2.2	Pirfenidone	Tablet	267mg	For management of idiopathic pulmonary fibrosis
26.2.1	Nintedanib	Capsule	150mg	For treatment of progressive fibrotic lung diseases

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
27.1.1	Benzocaine + Chlorbutol + Paradichlorobenzene + Turpentine oil	Solution (ear drops)	2.7%+2%+5%+15%	Used to dissolve solid impacted ear wax.
27.1.2	Betahistine	Tablet	8mg	Used for treatment of various forms of vertigo
			16mg	
27.2.4	Neomycin + Betamethasone	Solution (nasal drops)	0.5% (as sulphate) + (0.1% as sodium phosphate)	Reclassified from 27.1
28.2.2	Adalimumab	Injection	40mg/0.4mL	Listed for adults in addition to the previous listing for use in children
28.2.4	Baricitinib	Tablet	2mg	For moderately to severely active rheumatoid arthritis when patients have had inadequate response to one or more tumour necrosis factor antagonist treatment e.g., with etanercept, adalimumab, infliximab, golimumab
28.2.5	Cyclosporin	Capsule	25mg	Added in section 28 in addition to listing in section 9.1
			100mg	
28.2.12	Methylprednisolone	PFI	125mg (as sodium succinate)	
			500mg (as sodium succinate)	
28.2.13	Prednisolone	Tablet	5mg	
			20mg	
28.2.16	Tocilizumab	Injection, single use prefilled syringe for subcutaneous Injection	162mg/0.9mL	Formulation added for ease of administration
28.2.17	Triamcinolone	Injection (suspension)	40mg/1mL amp (as acetone or hexacetone)	For local and systemic treatment for joint and soft tissue inflammation.
28.3.5	Rituximab	Injection (IV)	10mg/mL (10mL vial)	Added for Juvenile joint diseases in addition to being listed for adult use.
			10mg/mL (50mL vial)	
28.3.6	Tocilizumab	Injection, single use prefilled syringe for subcutaneous Injection	162mg/0.9mL	Added for ease of administration

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
28.3.7	Triamcinolone	Injection (suspension)	40mg/1mL amp (as acetoneide or hexacetoneide)	Added for Juvenile joint diseases in addition to being listed for adult use.
31.1.2	Calcium Carbonate with Vitamin D	Tablet	Minimum Calcium 1000mg/600IU of vitamin D	Treatment and prevention of osteoporosis and subsequent fractures in post-menopausal women
31.1.3	Calcium polystyrene sulphonate	Powder	15g sachet	Available in easy-to-use pre-packaged 15g sachets that can be purchased in small quantities. Both calcium polystyrene sulphonate, and sodium polystyrene sulphonate are equally efficacious in lowering serum potassium.
31.2.4	Potassium acid phosphate	Injection	13.6% w/v sterile aqueous solution	Added as a phosphate replacement
31.2.6	Sodium chloride	Injectable solution (infusion)	0.9% (isotonic) (100mL)	Different sizes for ease of use
			0.9% (isotonic) (250mL)	
			3% (hypertonic) (100mL amp)	
32.1	Ascorbic acid (Vit C)	Tablet	1gm	Added for treatment in adults
			250mg	Added for treatment in paediatric
32.3	Calcium carbonate	Tablet (chewable)	500mg	Added in addition to other calcium formulations
33.1.1.4	Combined amino acid, glucose and lipids with Medium chain Triglycerides (MCT) + Long chain Triglycerides (LCT)	Solution for IV infusion	500mL	Added for ease of dosing
			2 Litres	
34.1.1.9	Technetium - 99m disofenin (DISIDA)	Injection, prepared from a non-radioactive disofenin kit for radiolabelling with 99mTc prior to administration		Replaced HIDA
34.1.1.10	Technetium - 99m leucocytes	Injection		Required radiopharmaceutical

#	Name of Medicine (generic/INN)	Dose-form	Strength / Size	Notes
34.1.1.11	Technetium - 99m mebrofenin (BRIDA)	Injection, prepared from a non-radioactive mebrofenin kit for radiolabelling with 99mTc prior to administration		Required radiopharmaceutical
34.1.1.12	[Technetium-99m] pentetate (DTPA)	Injection, Inhalation, prepared from a non-radioactive pentetate kit for radiolabeling with 99mTc prior to administration		Required radiopharmaceutical
34.1.1.13	[Technetium-99m] sodium pertechnetate	Injection, eluted from approved 99Mo/99mTc radionuclide generator		Required radionuclide generator
34.1.1.14	[Technetium-99m] sodium pertechnetate	Precursor radiopharmaceutical, eluted from approved 99Mo/99mTc radionuclide generator		Required radionuclide generator
34.1.2.1	[Fluorine-18] Prostate Specific Membrane Antigen (PSMA) 1007			Required radiopharmaceutical
34.1.2.4	Germanium-68/ Gallium-68 radionuclide generator	Radionuclide generator	0.74 – 1.85 GBq	Required radionuclide generator
34.2.1	[Iodine-131] sodium iodide	Oral solution	5 mCi/mL	Required radiopharmaceutical
			25 mCi/mL	

Appendix 2: List of Deletions from KEML 2019

2019 Section	Name of Medicine	Dose-form	Strength / Size	Reasons and Notes
1.1.1.3	Medical air	Inhalation (medical gas)		Reclassified to 1.4 – Medical gases
1.1.1.4	Nitrous oxide	Inhalation (medical gas)		Reclassified to 1.4 – Medical gases
1.1.1.5	Oxygen	Inhalation (medical gas)		Deleted under 1.1.1 – inhalational medicines but retained under 1.4 - Medical gases
1.2.3	Lignocaine	Injection (preservative-free)	1% (as HCl) (Vial)	Not available in the market and bupivacaine is preferred
5.2.3	Benztropine	Injection	2mg/2mL	Limited Use and not readily available
5.2.5	Dantrolene	Injection	20mg	Not an anti-dote. Classified under adjuvant medicines for theatre use
5.2.15	Penicillamine	Tablet	250mg	Limited use
5.2.23	Thiamine (Vit B1)	Tablet	50mg (as HCl)	Deleted from section on medicines used in poisonings but retained in section 32
7.1.3	Antischistosomes and other Antitrematode Medicines			Subsection deleted and consequently medicine listed under category
7.1.3.1	Praziquantel	Tablet (scored)	600mg	7.1.3 – antischistosomal and other antitrematode medicines subsection deleted
7.2.3.2	Ertapenem	PFI	1g	Deleted as it has less activity than meropenem in Pseudomonas infections, Acinetobacter and Enterococcus. Meropenem is listed as the class representative
7.2.5.1.4	Rifabutin	Capsule	150mg	Deleted due to change in treatment guidelines
7.2.5.1.6	Rifapentine	Tablet	150mg	Deleted as it is not used as a single molecule; Listed as a fixed dose combination of Rifapentine + Isoniazid
7.4.2.2.1	Efavirenz (EFV)	Tablet	200mg (cross-scored) [c]	Deleted due to change in treatment guidelines

2019 Section	Name of Medicine	Dose-form	Strength / Size	Reasons and Notes
7.4.2.2.3	Nevirapine (NVP)	Tablet (dispersible)	50mg	Not required. National HIV Prevention and Treatment Guideline 2022 recommends using NVP for up to 4 weeks and then switching to pDTG.
7.4.2.3.1	Atazanavir (ATV)	Capsule	100mg (as sulphate)	Deleted due to change in treatment guidelines
7.4.2.3.4	Lopinavir + ritonavir (LPV+r)	Oral liquid	400mg + 100mg/5mL	Deleted due to change in treatment guidelines
		Oral Pellets (Capsule)	40mg + 10mg [c]	Deleted due to change in treatment guidelines
7.4.2.3.5	Ritonavir (RTV)	Oral liquid	400mg/5mL	Deleted due to change in treatment guidelines
7.4.2.4.2	Raltegravir (RAL)	Tablet	25mg	Deleted due to change in treatment guidelines
		Tablet	100mg	Deleted due to change in treatment guidelines
		Tablet	400mg (f/c)	Deleted due to change in treatment guidelines
		Granules for oral suspension	100mg sachet	Deleted due to change in treatment guidelines
7.4.2.5.2	Abacavir + Lamivudine + Lopinavir + ritonavir (ABC+3TC+LPV+r)	Granules for oral suspension	30mg (as sulphate) + 15mg + 40mg + 10mg	Deleted due to change in treatment guidelines
7.4.2.5.7	Zidovudine + Lamivudine (AZT+3TC)	Tablet	60mg + 30mg [c]	Deleted due to change in treatment guidelines. National HIV Prevention and Treatment Guideline 2022 recommends using AZT for CALHIV who can't tolerate ABC.
7.4.3.2	Oseltamivir	Oral powder	12mg/mL	Limited use; Previously listed for outbreak management;
9.1.1	Antithymocyte globulin (ATG) (rabbit)	PFI	25mg vial	Deleted and replaced with equine formulation
9.2.1.16	Doxorubicin	PFI or Solution for Injection	10mg vial (as HCl)	Not cost effective; Retained 50mg strength
9.2.2.4	Imatinib	Tablet	100mg (as mesylate)	Deleted as its not commonly used; 400mg retained
9.2.4.4	Capecitabine	Tablet	150mg	Deleted from subcategory on hormones and antihormones as had erroneously been listed; Retained under cytotoxic medicines

2019 Section	Name of Medicine	Dose-form	Strength / Size	Reasons and Notes
9.2.4.4	Capecitabine	Tablet	500mg	Deleted from subcategory on hormones and antihormones as had erroneously been listed; Retained under cytotoxic medicines
9.2.4.6	Diethylstilboestrol (DES)	Tablet	5mg	Limited clinical use
9.2.5.1.2	Hepatobiliary iminodiacetic acid (HIDA)			Deleted and replaced with DISIDA
9.2.5.1.4	Iminodiacetic acid			Deleted as not required
9.2.5.2.2	Copper 64 (Cu 64)	Precursor radiopharmaceutical	925 MBq to 2,770 MBq (25 mCi to 75 mCi) per vial at 925 MBq/mL (25 mCi/mL)	Deleted- Not essential for now
9.2.6.2	Mesna	Tablet	400mg	Deleted oral formulation as injection may be used orally
12.2.2.4	Tranexamic acid	Injection	100mg/mL (5mL amp)	Deleted from anticoagulants and reclassified under coagulants.
12.2.2.4	Tranexamic acid	Tablet	500mg	Deleted from anticoagulants and reclassified under coagulants.
14.1.1	Bisoprolol	Tablet	1.25mg	Deleted strength and replaced with 2.5mg Delete; Not available locally
14.2.3	Bisoprolol	Tablet	1.25mg	Deleted strength and replaced with 2.5mg Delete; Not available locally
14.3.3.1	Bisoprolol	Tablet	1.25mg	Deleted strength and replaced with 2.5mg Delete; Not available locally
14.3.3.2	Carvedilol	Tablet	6.25mg	Deleted from Antihypertensive – Beta blockers; Retained under antianginals, antiarrhythmics and medicines for heart failure
14.3.3.2	Carvedilol	Tablet	12.5mg	Deleted from Antihypertensive – Beta blockers; Retained under antianginals, antiarrhythmics and medicines for heart failure

2019 Section	Name of Medicine	Dose-form	Strength / Size	Reasons and Notes
14.3.4.3	Verapamil	Tablet (s/r)	240mg (as HCl)	Deleted. Not supported by WHO Hypertension guidelines and National CVD guidelines
14.3.6.3.1	Torse mide	Tablet (scored)	20mg	Deleted from section 14.3 as use as an antihypertensive not supported by robust evidence. Retained in section 14.4 – medicines for heart failure and classified under section 18 - Diuretics
14.4.1	Bisoprolol	Tablet	1.25mg	Strength Deleted and replaced with 2.5mg
18.6	Vasopressin	Injection	20 units/mL	Deleted from category as wrongly classified. Is an antidiuretic but classified under diuretics
15.5.4	Ivermectin	Tablet (scored)	3mg	Deleted from Dermatological (Topical) section but retained under antifilarials and Medicines for ectoparasitic infections
21.2.1	Anti Snake venom immunoglobulin	Injection (for IV infusion)	Monovalent serum (for Boomslang (Dyspholidus typus, African bites), vial	Formulation deleted but retained polyvalent formulation
21.3.5	Measles vaccine (live attenuated)	PFI + diluent	5mL vial (10 doses)	Deleted but retained MR and added MMR vaccines
21.3.11	Tetanus toxoid (adsorbed)	Injection (suspension)	10mL vial (20 doses)	Phased out expected with replacement by Tetanus + Diphtheria (Td) vaccine
22.1.2	Azithromycin	Eye drops	1.50%	Not available in Kenyan market
23.9.1	Caffeine citrate	Oral liquid (drops)	20mg/mL (as disodium phosphate) [c]	Formulation deleted, item description for the other formulations amended to include IV or oral route of administration.
27.1.6	Neomycin + Betamethasone	Solution (ear & nasal drops)	0.5% (as sulphate) + (0.1% as sodium phosphate)	Deleted from Section 27.1 and added under 27.2 Repeated use in an ear with perforated / nonintact tympanic membrane can cause Sensorineural hearing loss (Ototoxic)

2019 Section	Name of Medicine	Dose-form	Strength / Size	Reasons and Notes
29.1	Alendronate	Tablet	10mg	Deleted 10mg which is a daily dose and retained 70mg which is a once weekly dose
33.1.1.2	3-chamber bag for peripheral administration	Solution for IV infusion	1 litre	Deleted as was duplicated in 33.1.1.3
33.1.1.2	3-chamber bag for peripheral administration	Solution for IV infusion	1.5 litre	Deleted as was duplicated in 33.1.1.3
33.1.1.4	3-chamber bag for central administration	Solution for IV infusion	1 litre	Deleted as was duplicated in 33.1.1.5
33.1.1.4	3-chamber bag for central administration	Solution for IV infusion	2 litres	Deleted as was duplicated in 33.1.1.5
33.1.1.11	Total parenteral nutrition (TPN) with Medium chain Triglycerides (MCT) / Long chain Triglycerides (LCT)	Solution for IV infusion	625mL bag	Deleted as was duplicated in 33.1.1.5 and 33.1.1.3
33.1.1.11	Total parenteral nutrition with Medium chain Triglycerides (MCT) / Long chain Triglycerides (LCT)	Solution for IV infusion	1,250mL bag	Deleted as was duplicated in 33.1.1.5 and 33.1.1.3
33.1.2.2	Hypocaloric sip feed with fibre	Liquid	200mL	Deleted since it was duplicated in 33.1.2.5
33.1.2.4	Nutritionally complete, hydrolysed diet with fibre.	Liquid	1,000mL	Deleted as not available in the market.
33.1.2.7	Nutritionally complete high protein energy sip feed	Liquid	200mL	33.1.2.7 Combined with 33.1.2.1
33.1.2.8	Nutritionally complete Sip feed	Liquid	200mL	Deleted 33.1.2.8 Combined with 33.1.2.3
33.1.2.11	Nutritionally complete formula with fibre for tube feeding	Liquid	500mL	Deleted 33.1.2.11 Combined with 33.1.2.3
33.1.2.15	Specialized hepatic sip feed	Liquid	200mL	Deleted 33.1.2.15 Combined with 33.1.2.14
33.2.2	Point of use Water treatment	Solution	1.2% Sodium hypochlorite [NaOCl] (150mL)	Deleted as not for listing on KEML

Appendix 3: Summary of Other Major Changes

KEML 2023 Title	Main Change	Details of Change
1.3 Pre- and intra-operative medication and sedation for short-term procedures and adjuncts for spinal and epidural anaesthesia	Change of title	Changed from: Pre- and intra-operative medication and sedation for short-term procedures
2. Muscle relaxants (peripherally-acting) and cholinesterase inhibitors and anticholinergics	Change of title and section reorganization	Title changed to include anticholinergics Changed from: Muscle relaxants (peripherally-acting) and cholinesterase inhibitors Subdivided into subsections as listed below
2.1 Muscle relaxants	New subtitle	
2.2 Cholinesterase Inhibitors	New subtitle	
2.3 Anticholinergics	New subtitle	
3.3 Adjuncts for pain management and medicines for other symptoms in palliative care	Change of subtitle	Changed from: Medicines for other common symptoms in palliative care
7.4.4.2.2 Pangenotypic direct-acting antiviral combinations	New subtitle	
7.5.5.1 Human African Trypanosomiasis	Change of subtitle	Change from: African Trypanosomiasis Word Human included in subtitles below
14.3.6.3 Other anti-hypertensive agents – Loop diuretics	Deleted	Deleted from section 14.3 as use as an antihypertensive not supported by robust evidence. Retained in section 14.4 – medicines for heart failure and classified under section 18 - Diuretics
14.3.6.5 Non-selective alpha adrenoceptor antagonist	New subtitle	
20.5.2.6 Fixed dose combinations – Oral hypoglycaemic agents	New subtitle	
20.8 Medicines for Management of Hyperparathyroidism	New subtitle	
24. Dialysis solutions	Change of title	Change from: Peritoneal dialysis solutions
26.2 Medicines for Idiopathic Pulmonary Fibrosis	New subtitle	
28. Medicines for Rheumatology	Change of title	Changed from: Medicines used in joint diseases
28.2 Disease-modifying agents used in rheumatic disorders (DMARDs) and Immunosuppressants used in Rheumatology	Change of subtitle	Changed from: Disease-modifying agents used in rheumatoid disorders (DMARDs)

28.2.1 and 28.2.2	Deleted the subtitles and listed all medicines under 28.2 alphabetically	
33. Preparations for clinical nutrition management	Change of title	Change from: Preparations for clinical management of nutrition
34. Nuclear medicine (radiopharmaceuticals)	Separated from section 9 and reorganized	Previously 9.2.5 Organized into major subsections sections as shown below
34.1 Diagnostic radiopharmaceuticals	New subtitle	
34.2 Therapeutic radiopharmaceuticals	New subtitle	
35. Medicines for benign prostatic hyperplasia (BPH)	Separated from section 9	Previously 9.3

Change of AWaRe Categorization

7.2.2.1	Azithromycin	Tablet (scored)	500mg (anhydrous)	Access to Watch
7.2.2.1	Azithromycin	PFOL	200mg/5mL	Access to Watch
7.2.2.2	Cefixime	Tablet	400mg (as trihydrate)	Access to Watch
7.2.2.5	Ceftriaxone	Injection (IM/IV)	250mg (as sodium salt) [c]	Access to Watch
7.2.2.5	Ceftriaxone	Injection (IM/IV)	1g (as sodium salt)	Access to Watch

Appendix 4: Contributors to KEML 2023 Review

Following is a list of those who contributed to the various stages of KEML 2023 development indicating their position or area of expertise and place of work.

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45.	Serah Njoki Gathu	Mama Lucy Kibaki Hospital
46.	Simon Mueke	Kenya Obstetrical Gynaecological Society
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14.	Winnie Mwangi	KUTRRH

Appendix 5: KEML Amendment Proposal Form

Please complete each of the sections and submit the Form together with the hard and/or soft copies of supporting evidence and any other relevant documentation to:

The Head, Directorate of Health Products and Technologies
Afya House, Cathedral Road
Box 30016-00100, Nairobi, Kenya
Email: pharmacyhpt2019@gmail.com

Name of Proposer:

Designation:

Workplace:

Contact:

Tel:

Email:

1. **Type of Amendment proposed** (*please tick*)

- » Addition []
- Deletion []
- Change of dosage form []
- » Other []

2. **Details of proposal:**

3. **Supporting arguments/evidence base**

4. **Supporting references/relevant documentation**

Signature:

Date:

Appendix6: Terms of Reference for the KEML Review TWG

ToR for the TWG were:

1. Be the advisory team for evidence required to review the HPT lists.
2. Ensure that MOH standards and regulations are taken into account and adhered to during the review process.
3. Ensure timely submission of agreed milestones/ reports for the review process.
4. Engage/consult/collaborate with all the relevant experts and stakeholders during the review process.
5. Managing conflicts of interest
6. Review both local and global literature and make recommendations for inclusion in the essential HPT lists.

Specifically provide:

- » Evidence available to guide the review.
- » Develop review questions.
- » Identify best practice in areas where research evidence is absent, weak, or equivocal.
- » Identify cost effectiveness of interventions, actions.
- » Identify opportunities and challenges that may be faced in implementing the recommendations.

Role of TWG

- » Select Medicines for listing on the next edition of the Kenya Essential Medicine List 2023
- » Apply the WHO essential medicines concepts and principles on rational selection, affordable prices and sustainable financing in the review and listing process.
- » Make reference to submissions on amendments from healthcare workers for additions/deletions/ substitutions, local and global references to guide selection and listing.
- » Adhere to standard operating procedures adopted by the National Medicine and Therapeutics Committee (NMTC) for the review process, including those for managing conflict of interest.
- » Engage/consult/collaborate with relevant experts and stakeholders in the review and listing process.
- » Co-opt any other member(s) on need basis.

TWG Responsibilities

- » Identify the priority areas to be considered in the essential list development/review.
- » Do a preliminary search of the literature to identify relevant sources.
- » Draft potential recommendations. Considering the potential final form of the essential list makes it easier to focus the development work.
- » Sharpen the focus.
- » Formulate questions.
- » Coordinate review (internal and external).
- » Update the essential list based on reviews received.

Appendix 6: Terms of Reference for the National Medicines & Therapeutics Committee (2023)

1. Coordination of the development and review of policies on clinical governance and rational use of Essential Medicines and other essential Health Products and Technologies (EHPT)
2. Develop standards, including guidelines and standard operating procedures (SOPs) as applicable on:
 - Establishment and operations of Medicines and Therapeutics Committees (MTCs) at various levels (national, county, and institutional)
 - Good Pharmaceutical Procurement Practices (GPPP), Good Prescribing Practices (GPP) and Good Dispensing Practices (GDP)
 - Cost-effective use of medicines and other EHPTs
 - Adverse reactions/event monitoring and reporting, quality assurance and monitoring/surveillance for antimicrobial resistance (AMR)
 - Clinical audits and medicines use evaluation studies.
3. Develop/review and update all the relevant appropriate use guidelines, including:
 - National Clinical Management and Referral Guidelines
 - National Formulary
 - National Essential HPT lists such as the Kenya Essential Medicines List (KEML), Kenya Essential Medical Supplies List (KEMSL) and Kenya Essential Medical Laboratory commodities List (KEMCL)
 - and other specific/specialized treatment guidelines and protocols.
4. Collaborate with relevant Departments/Divisions/Units involved in the introduction of disease-based or vertical programs in which selection and use of medicines and other EHPT is a significant component.
5. Facilitate medicines and other EHPTs education regarding appropriate use and safety for health workers, consumers, relevant County and National Agencies
6. Support County and Hospital MTCs through development and dissemination of guidelines, training materials and capacity building
7. Actively participate in the development, review, and revision as necessary of:
 - Pre-service health professional programs in management and appropriate medicines use and therapeutics.
 - In-service training and Continuous Professional Development (CPD) courses in management and use of medicines and therapeutics
8. Review relevant research findings and recommend appropriate interventions.
9. Advise and advocate to the relevant National and County level authorities appropriate mitigation measures for implementation in the event of emergency disease outbreaks or health threats.
10. Co-opt to the NMTC any other member(s) on need basis or as may be necessary.
11. Undertake advocacy for the role, importance, and support for NMTC including sustainable mode of funding.
12. Submit quarterly performance reports to the appointing authority, i.e., the Principal Secretary, Ministry of Health.

Appendix 7: AWaRe Classification of Antibiotics

Access group	Examples
<p>This group includes antibiotics and antibiotic classes that have activity against a wide range of commonly encountered susceptible pathogens while showing lower resistance potential than antibiotics in Watch and Reserve groups. Access antibiotics should be widely available, affordable, and quality-assured to improve access and promote appropriate use. Selected Access group antibiotics (shown here) are included on the WHO EML as essential first-choice or second-choice empirical treatment options for specific infectious syndromes.</p>	<p>Amikacin Amoxicillin Amoxicillin + clavulanic acid Ampicillin Benzathine benzylpenicillin Benzylpenicillin Cefalexin Cefazolin Doxycycline Flucloxacillin Gentamicin Metronidazole Nitrofurantoin Phenoxyethylpenicillin (Penicillin V) Tinidazole</p>
Watch group	Examples
<p>This group includes antibiotics and antibiotic classes that have higher resistance potential and includes most of the highest priority agents among the Critically Important Antimicrobials (CIA) for Human Medicine and/or antibiotics that are at relatively high risk of selection of bacterial resistance. Watch group antibiotics should be prioritized as key targets of national and local stewardship programmes and monitoring. Selected Watch group antibiotics (shown here) are included on the WHO EML as essential first-choice or second-choice empirical treatment options for a limited number of specific infectious syndromes.</p>	<p>Azithromycin Cefixime Cefotaxime Ceftazidime Ceftriaxone Cefuroxime Ciprofloxacin Clarithromycin Clindamycin Cotrimoxazole (Sulfamethoxazole + Trimethoprim) Erythromycin Piperacillin + Tazobactam</p>
Reserve group	Examples
<p>This group includes antibiotics and antibiotic classes that should be reserved for treatment of confirmed or suspected infections due to multi drug-resistant organisms and treated as “last-resort” options. Their use should be tailored to highly specific patients and settings when all alternatives have failed or are not suitable. They could be protected and prioritized as key targets of national and international stewardship programmes, involving monitoring and utilization reporting, to preserve their effectiveness. Selected Reserve group antibiotics (shown here) are included on the WHO EML when they have a favourable risk-benefit profile and proven activity against “Critical Priority” or “High Priority” pathogens identified by the WHO Priority Pathogens List, notably Carbapenem- resistant Enterobacteriaceae.</p>	<p>Ceftazidime + avibactam Colistin Fosfomycin Linezolid Meropenem Polymyxin B Teicoplanin Tigecycline Vancomycin</p>

Note that WHO recommends that each country adapt the antibiotic medicines listed as Access, Watch or Reserve to its settings.

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