

Essential Drugs Concept and Rational Drug Therapy

Essential Drugs Concept

Definition

- The **Essential Drugs Concept** refers to the idea that certain medications are vital for addressing the major healthcare needs of a population.
- These drugs should be available at all times, in adequate amounts, in appropriate dosage forms, and at a price the community can afford.

Origin and History:

- The **World Health Organization (WHO)** introduced the concept in **1977**, publishing the first **Model List of Essential Medicines (EML)**.
- This list is updated every 2 years based on evolving health needs, efficacy, safety, and cost-effectiveness.
- Countries are encouraged to create their own National Essential Medicines Lists (NEMLs) based on local disease patterns and resources.

Objectives of Essential Drug Concept

- Improve accessibility of drugs in community and public healthcare systems.
- Ensure rational prescribing by promoting the use of a core list of drugs.
- Control healthcare costs by prioritizing cost-effective and necessary drugs.
- Enhance availability and stock management at all levels of the supply chain.

Criteria for Selecting Essential Drugs

- Relevance to public health needs.
- Proven efficacy and safety.
- Cost-effectiveness.
- Availability in suitable dosage forms and storage stability.
- Compatibility with local infrastructure and health system.

Examples of Essential Drugs Categories

Therapeutic Area	Example of Essential Drugs
Analgesics	Paracetamol, Ibuprofen
Antimicrobials	Amoxicillin, Ciprofloxacin, Cotrimoxazole
Antimalarials	Chloroquine, Artemisinin combinations
Antihypertensives	Amlodipine, Enalapril

Diabetics

Insulin, Metformin

WHO Model List & Indian Essential Drug List

- **WHO publishes** a model list every 2 years.
- India has its own National List of Essential Medicines (NLEM), last updated in 2022, published by the Ministry of Health and Family Welfare.
- Community pharmacists must be familiar with NLEM for regulatory compliance, ethical practice, and cost-effective dispensing.

Benefits:

- **Cost savings** by avoiding the use of unnecessary or overly expensive medicines.
- Efficient procurement and distribution.
- Improved treatment outcomes.
- Better inventory and stock management in healthcare facilities.
- Helps in standardizing treatment protocols.

Rational Drug Therapy (RDT)

Definition

- According to the **World Health Organization (WHO)**:
 - *Rational use of medicines requires that patients receive medications appropriate to their clinical needs, in doses that meet their individual requirements, for an adequate period of time, and at the lowest cost to them and their community.*
- This concept ensures optimal therapeutic outcomes with minimal risks and financial burden.

Core Components of Rational Drug Therapy

- Often referred to as the **"6 Rights of Medication Use"**:

Component	Description
Right Patient	Ensure proper identification and history evaluation.
Right Drug	Evidence-based selection based on efficacy and safety.
Right Dose	Appropriate dose considering age, weight, disease, and organ functions.
Right Route	Oral, parenteral, topical, or others as clinically required.

Right Time and Duration	Proper frequency and length of therapy to ensure effectiveness.
Right Cost	Prefer economically feasible and effective therapy (e.g., generics).

- These components **minimize therapeutic failures** and **improve adherence**.

Pillars of Rational Drug Therapy (Principles)



Correct Diagnosis

Accurate identification of the patient's condition



Appropriate Drug Selection

Choosing the most suitable medication for the diagnosis



Correct Dose & Duration

Determining the right amount and length of treatment



Adequate Patient Counseling

Providing clear instructions and support to the patient



Monitoring & Follow-up

Regularly checking the patient's progress and adjusting treatment

1. Correct Diagnosis

- Clinical and laboratory evaluation must confirm the condition before selecting drug therapy.

2. Appropriate Drug Selection

- Selection based on:
 - Efficacy

- Safety
- Cost-effectiveness
- Suitability to patient condition
- Availability in the community pharmacy

3. Correct Dose, Duration, and Frequency

- Personalized based on:
 - Age
 - Body weight
 - Renal or hepatic function
 - Comorbid conditions

4. Adequate Patient Counseling

- Instructions regarding:
 - Dosage schedule
 - Storage
 - Precautions
 - Side effects
 - Diet
 - Adherence

5. Monitoring and Follow-up

- Assess response to therapy, detect adverse effects, and modify treatment if needed.

Consequences of Irrational Drug Use

- Irrational prescribing, dispensing, or consumption can lead to:
 - Antibiotic resistance (major global threat)
 - Increased incidence of adverse drug reactions
 - Polypharmacy-related complications
 - Poor therapeutic outcomes or treatment failure
 - Increased healthcare expenditure for patients and communities
 - Loss of patient confidence in healthcare professionals
 - Resource wastage in community pharmacies

Common Examples of Irrational Drug Use

- Prescribing antibiotics for viral infections such as common cold



FREE PREVIEW

[Click here to visit our website](#)

PHARMACY PREMIUM NOTES

Complete subject and semesters are available on FirstHope app only.



[Scan or click here](#)

Click here to get the app



Available on Google Play

JOIN THE FIRSTHOPE COMMUNITY

Join our Telegram channel

Click here to join Telegram



[Scan or click here](#)

@FirstHopeNotes

Instagram

@firsthope.official

[Click here to follow >](#)

YouTube channel

FirstHope-Pharmacy / Live streams

[Click here to watch >](#)

WhatsApp channel

Follow FirstHope on WhatsApp

[Click here to join >](#)

FirstHope website

firsthopenotes.com

[Click here to visit >](#)

B.Pharm / D.Pharm / M.Pharm / Pharm.D

Preview notes. Complete subjects and semesters in the FirstHope app.