

# CONCEPT OF ESSENTIAL MEDICINES

**Dr. Suryaprakash Dhaneria**

M.D. (Pharmacology),

D.M.(Clinical Pharmacology),

D.N.B.(Clinical Pharmacology & Therapeutics)

M.Sc.(Bio chemistry), LL.B.(Hons.)

**MNAMS**

Acting Dean (Academics)

Professor & Head

Department of Pharmacology

All India Institute of Medical Sciences (AIIMS)

Raipur (C.G.)

*“Medicines are nothing in themselves, but are the very hands of gods if employed with reason and prudence.”*

*-Herophilus*

# INDIAN SCENARIO

- ❖ **INDIA IS DEVELOPING COUNTRY WITH LIMITED RESOURCES.**
- ❖ **SIGNIFICANT BURDEN OF DISEASES IN INDIAN POPULATION.**
- ❖ **LOT OF RESOURCES GET WASTED IN UNNECESSARY DIAGNOSTIC PROCEDURES AND DUE TO IRRATIONAL USE OF MEDICINES.**

# **SHORTCOMING OF MEDICAL CURRICULUM**

**TEACHING AND TRAINING PUT MORE EMPHASIS ON DIAGNOSTIC RATHER THAN THERAPEUTIC ASPECTS OF DISEASES.**



# **MEDICAL CURRICULUM NEED TO BE MODIFIED**

**MEDICAL CURRICULUM MUST ENABLE THE UNDERGRADUATES TO ACQUIRE KNOWLEDGE AND SKILLS TO MANAGE COMMON ILLNESSES PREVALENT IN COUNTRY PROMPTLY AND EFFECTIVELY THROUGH PROFICIENCY IN CLINICAL ACUMEN AND RATIONAL APPROACH TOWARDS USE OF MEDICINES.**

# WHO POLICY PERSPECTIVE IN MEDICINES (2002)

***WORLDWIDE MORE THAN 50 PERCENT OF ALL MEDICINES ARE PRESCRIBED, DISPENSED, OR SOLD INAPPROPRIATELY, WHILE 50 PERCENT OF THE PATIENTS FAIL TO TAKE THEM CORRECTLY.***

## ACCORDING TO W.H.O.

***"RATIONAL USE OF DRUGS REQUIRES THAT PATIENTS RECEIVE MEDICATION APPROPRIATE TO THEIR CLINICAL NEEDS, IN DOSES THAT MEET THEIR OWN REQUIREMENTS FOR AN ADEQUATE PERIOD OF TIME AND THE LOWEST COST TO THEM AND THEIR COMMUNITY."***

# KEY OF RATIONAL DRUG PRESCRIBING

**IS TO USE -**

- \* RIGHT DRUG**
- \* IN RIGHT PATIENT**
- \* IN RIGHT DOSE**
- \* BY RIGHT ROUTE**
- \* AT RIGHT TIME**
- \* WITH RIGHT DOCUMENTATION**



# ESSENTIAL MEDICINES

“THE MEDICINES THAT SATISFY THE HEALTHCARE NEEDS OF MAJORITY OF THE POPULATION, THEREFORE THESE SHOULD BE AVAILABLE AT ALL TIMES, AT ALL THE PLACES, IN ADEQUATE AMOUNT, IN APPROPRIATE DOSAGE FORM AND AT AFFORDABLE COST.”

# HISTORICAL BACKGROUND

- TANZANIA FIRST PREPARED EML IN 1970.
- WHO STARTED PUBLISHING EML FROM 1977.
- 19<sup>TH</sup> EML OF WHO PUBLISHED IN 2015 CONTAINS 409 MEDICINES INCLUDING 28 FDCs.
- NATIONAL LIST OF ESSENTIAL MEDICINES -

YEAR	NO. OF MEDICINES
1996	279
2003	354
2011	348
2015	376

- NLEM - 2015 CONTAINS 24 FDCs.

# CRITERIA FOR PREPARING EML

**AFTER IDENTIFYING THE DISEASES MORE PREVALENT IN MAJORITY OF POPULATION, A MULTIDISCIPLINARY COMMITTEE PREPARES ESSENTIAL MEDICINE LIST ON THE BASIS OF -**

“

**EFFICACY**

- **SAFETY**
- **COST**
- **EASE OF ADMINISTRATION**
- **LOCAL AVAILABILITY**
- **STORAGE FACILITY**

# CRITERIA FOR PREPARING EML

- **MEDICINES IN LIST ARE MENTIONED BY NON PROPRIETARY NAMES**
- **MEDICINE SHOULD BE APPROVED/LICENCED IN INDIA.**
- **REGULATORY AUTHORITIES MUST ASSURE THE QUALITY OF ESSENTIAL MEDICINES.**
- **THERE SHOULD BE PROVISION TO PROVIDE RELEVANT INFORMATION OF ESSENTIAL MEDICINES.**

# CRITERIA FOR PREPARING EML

- THE MEDICINES REQUIRED IN VARIOUS NATIONAL HEALTH PROGRAMMES ARE INCLUDED IN NLEM. ANY MEDICINE/VACCINE, AS AND WHEN RECOMMENDED UNDER A NATIONAL HEALTH PROGRAMME WILL BE DEEMED TO HAVE BEEN INCLUDED IN NLEM.
- FDCs ARE GENERALLY NOT INCLUDED UNLESS HAVING PROVEN ADVANTAGE.
- PRICE OF TOTAL TREATMENT IS TO BE CONSIDERED AND NOT THE UNIT PRICE OF MEDICINE.
- SALES TURNOVER WILL NOT INFLUENCE SELECTION OF MEDICINES IN EML.

## EML - A DYNAMIC DOCUMENT NOT STATIC

**SELECTION OF ESSENTIAL MEDICINES IS  
A CONTINUING PROCESS TAKING INTO  
CONSIDERATION THE CHANGING  
HEALTH PRIORITIES, EPIDEMIOLOGICAL  
SITUATION, PROGRESS IN THE  
PHARMACOLOGICAL AND  
PHARMACEUTICAL KNOWLEDGE.**

# NLEM (2015)

<b>LEVEL OF HEALTH CARE</b>	<b>NUMBER OF MEDICINES INCLUDED IN LIST</b>
<b>PRIMARY, SECONDARY &amp; TERTIARY</b>	<b>209</b>
<b>SECONDARY &amp; TERTIARY</b>	<b>115</b>
<b>TERTIARY</b>	<b>79</b>

# **FDACS - IN EML OF WHO & INDIA**

- **SULFAMETHOXAZOLE + TRIMETHOPRIM**
- **AMOXICILLIN + CLAVULANIC ACID**
- **IMIPENEM + CILASTATIN**
- **PIPERACILLIN + TAZOBACTAM**
- **SULFADOXINE + PYRIMETHAMINE**
- **ARTEMETHER + LUMEFANTRINE**
- **ARTESUNATE+ AMODIAQUINE**
- **ARTESUNATE+ MEFLOQUINE**
- **ARTESUNATE + SULFADOXINE + PYRIMETHAMINE**
- **INH + RIFAMPICIN**
- **INH + ETHAMBUTOL**
- **INH + RIFAMPICIN + ETHAMBUTOL**
- **INH + RIFAMPICIN + PYRAZINAMIDE**
- **INH + RIFAMPICIN + PYRAZINAMIDE + ETHAMBUTOL**



# FDACS - IN EML OF WHO & INDIA

- ZIDOVUDINE + LAMIVUDINE
- ZIDOVUDINE + LAMIVUDINE + NEVIRAPINE
- STAVUDINE + LAMIVUDINE + NEVIRAPINE
- EMTRICITABINE + TENOFOVIR
- EFAVIRENZ + EMTRICITABINE + TENOFOVIR
- LOPINAVIR + RITONAVIR
- ATAZANAVIR + RITONAVIR
- TENOFOVIR + LAMIVUDINE
- TENOFOVIR + LAMIVUDINE + EFAVIRENZ
- STAVUDINE + LAMIVUDINE
- LEDIPSVIR + SOFOSBUVIR
- OMBITASVIR + PARITAPREVIR + RITONAVIR
- ABACAVIR + LAMIVUDINE

# **FDCA - IN EML OF WHO & INDIA**

- **ETHINYLESTRADIOL + LEVONORGESTREL**
- **ETHINYLESTRADIOL + NORETHISTERONE**
- **MEDROXYPROGESTERONE ACETATE  
+ ESTRADIOL CYPIONATE**
- **FERROUS SALT + FOLIC ACID**
- **LIGNOCAINE + ADRENALINE**
- **LIGNOCAINE + PRILOCAINE**
- **ORAL REHYDRATION SALT**
- **GLUCOSE WITH SODIUM CHLORIDE**
- **LEVODOPA + CARBIDOPA**
- **BUDESONIDE + FORMOTEROL**
- **DPT + HIB + HEP B VACCINE**

# CRITERIA FOR DELETION OF MEDICINE FROM NLEM

1. **MEDICINE - BANNED IN INDIA.**
2. **REPORTS CAUSING CONCERN ABOUT SAFETY OF MEDICINES.**
3. **BETTER MEDICINE IS AVAILABLE IN RESPECT OF EFFICACY, SAFETY AND COST EFFECTIVENESS.**
4. **THE DISEASE FOR WHICH MEDICINE WAS USED IS NO LONGER A NATIONAL HEALTH CONCERN.**
5. **IN CASE OF ANTIMICROBIAL DRUGS, THE MEDICINE IS INEFFECTIVE DUE TO RESISTANCE.**

**MEDICINE OF SIGNIFICANT  
EFFICACY FOR THE DISEASE OF  
LOW PREVALENCE IS NOT  
INCLUDED IN EML BUT THAT IN NO  
WAY UNDERMINES THE  
IMPORTANCE OF MEDICINE AND  
NEED OF ITS AVAILABILITY AT AN  
AFFORDABLE COST.**



# ESSENTIAL MEDICINES

**“ ARE OF UTMOST  
IMPORTANCE, BASIC,  
INDISPENSIBLE AND NECESSARY  
FOR THE HEALTH AND NEEDS  
OF POPULATION.”**



# CONCEPT OF ESSENTIAL MEDICINES

1. **PROMOTES RATIONAL USE OF MEDICINES IN SOCIETY.**
2. **OFFERS BETTER QUALITY OF MEDICAL CARE.**
3. **RESULTS IN BETTER MANAGEMENT OF MEDICINES.**
4. **OFFERS COST EFFECTIVE USE OF HEALTH CARE RESOURCES.**
5. **IDENTIFY “MUST KNOW” DOMAIN FOR TEACHING AND TRAINING OF HEALTH CARE PROFESSIONALS.**





आरोग्यम् सुख सम्पदा

अखिल भारतीय आयुर्विज्ञान संस्थान, रायपुर (छत्तीसगढ़)  
**All India Institute of Medical Sciences, Raipur, Chhattisgarh**



**Thank You**

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