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Subject: Social & Preventive Pharmacy (BP-802T)

Unit: III

Topic: Universal immunization Programme & National programme for control of blindness

Universal Immunisation Programme

HIB

MMR

HPV

BCG

Hepatitis A

OPV

Rotavirus

DPT

HB

IPV

Pneumococcal

Varicella

Tdap

- Under Global Smallpox Eradication Program, it was experienced that immunization is the most powerful and cost-effective weapon for the prevention and control and even eradication of a disease.

- May 1974, WHO officially launched a global immunization program, known as **Expanded Program of Immunization** for the prevention and control of six major, killer disease of children, namely tuberculosis, diphtheria, pertussis, tetanus, poliomyelitis and measles, all over the world.

- It was called Expanded because:
  - Number of diseases covered are more.
  - Services are extended to all corners of the world, irrespective of cast, creed, community and ability to pay for it.
  - The child is immunized much before it is born.

- Beneficiaries were all expectant mothers and children up to 16 years of age.

- Immunization was recommended from 3rd month of infancy and for pregnant mothers, 3 doses of TT, respectively during 16-24 wks, 24-32 wks and during 36 wks.

- Government of India launched same program with same schedule on 1st January 1978 with the same objectives of reducing child morbidity and mortality rates and to achieve self sufficiency in the production of vaccines.

- WHO launched a social target of achieving Health for all by 2000 AD.

- In 1983, the schedule was revised and recommended only 2 doses of TT during pregnancy, 1st dose during 16-24 wks and 2nd dose during 24-36 wks and commencing routine immunization as early as 6 wks during infancy and services were concentrated to under 5.

- In October 1985, UNICEF emphasized the goal of achieving universal immunization 10 years early by 1990 so the global program was renamed as 'Universal Child Immunization-1990'.

- On 19 November 1985, GOI renamed EPI program, modifying the schedule as **'Universal Immunization Program'** dedicated to the memory of Late Prime Minister Mrs Indira Gandhi.

- Impetus was added to the existing program by shifting from under 5 to under 1 year of age and the quality of services was also improved. It was recommended to give 1st dose of TT to the pregnant mother in the first contact and 2nd dose after 1 month and BCG and OPV to the new born as early as at birth.

- Objectives of UIP were:
  - Elimination of neonatal tetanus
  - Eradication of paralytic poliomyelitis

- Strategy under UIP was:
  - 100% coverage of expectant mothers with 2 doses of TT
  - At least 85% coverage of infants with 3 doses DPT and OPV 1 dose each of BCG and Measles vaccine, before the child celebrates its 1st birthday.

- During 1992 , immunization program become a component of Child Survival and Safe Motherhood (CSSM) program. It was recommended to cover 100% among infant also.

- In 1995, Pulse Polio Immunization Program was launched as a strategy to eradicate poliomyelitis.

- In 1997, immunization activities have been an important component of National Reproductive and Child Health Program.

- In 2005, immunization schedule was revised incorporating hepatitis vaccine, 2 doses of JE vaccine in selected endemic districts , 1st during 9-12 months and 2nd during 16-24 months and 2 doses of measles vaccine, 1st dose during 9-12 months and 2nd dose during 16-24 months, under National Rural Health Mission (NRHM).

- In 2012, GOI declared 2012 as the "Year of Intensification of Routine Immunization".

- In 2013, GOI along with other S-E Asia regions, declared commitment towards measles elimination and congenital rubella syndrome control by 2020.

- In 2014, India was certified as "Polio free country".

- **National Immunization Schedule (NIS) for Infants, Children and Pregnant Women (India)**

Vaccine	When to give	Max. Age	Dose	Diluent	Route	Site
For Pregnant Women						
TT-1	Early in pregnancy		0.5 ml	NO	Intra-muscular	Upper Arm
TT-2	4 weeks after TT-1		0.5 ml	NO	Intra-muscular	Upper Arm
TT-Booster	If received TT dose in pregnancy within the last 3 years		0.5 ml	NO	Intra-muscular	Upper Arm

Cont..

Vaccine	When to give	Max. Age	Dose	Diluent	Route	Site
For Infants						
BCG	At birth	Till 1 year of age	0.1 ml (0.05 ml until 1 month of age)	Sodium Chloride	Intra-dermal	Left Upper Arm
Hepatitis B Birth dose	At birth	Within 24 hrs	0.5 ml	NO	Intra-muscular	Antero-lateral side of mid thigh
OPV-0	At birth	Within the first 15 days	2 drops	NO	Oral	
OPV 1,2 & 3	At 6,10 and 14 wks	Till 5 years of age	2 drops	NO	Oral	

Conti..

Rota Virus Vaccine	At 6,10 and 14 wks	Till 1 years of age	5 drops	NO	Oral	
IPV	At 14 wks	Up to 1 year of age	0.5 ml	NO	Intra-muscular	Antero-lateral side of mid thigh
Pentavalent 1,2 & 3	At 6,10 and 14 wks	Till 1 years of age	0.5 ml	NO	Intra-muscular	Antero-lateral side of mid thigh
Measles 1st dose	9-12 completed months	Till 5 years of age	0.5 ml	Sterile water	Sub-cutaneous	Right Upper Arm
JE 1st dose	9-12 completed months	Till 15 years of age	0.5 ml	Phosphate buffer	Sub-cutaneous	Left Upper Arm

Vitamin A (1st dose)	At 9 completed months with measles	Till 5 years of age	1 ml (1 lakh IU)	NO	Oral	
For Children						
DPT Booster-1	16-24 months	7 years	0.5 ml	NO	Intra-muscular	Antero-lateral side of mid thigh
Measles 2nd dose	16-24 months	Till 5 years of age	0.5 ml	Sterile water	Sub-cutaneous	Right Upper Arm
OPV booster	16-24 months	Till 5 years of age	2n drops	NO	Oral	

JE 2nd dose	16-24 months		0.5 ml	Phosphate buffer	Sub-cutaneous	Left Upper Arm
Vitamin A (2nd to 9th dose)	16 month then 1 dose every 6 months	Till 5 years of age	2 ml (2 lakh IU)	NO	Oral	
DPT Booster 2nd dose	5-6 years	7 years	0.5 ml	NO	Intra-muscular	Upper Arm
TT	10 years and 16 years		0.5 ml	NO	Intra-muscular	Upper Arm

If a dose is missed……..

- ✓Give the dose at the next opportunity irrespective of the time gap
- ✓Do not start the schedule all over again

Objectives

Objectives of UIP are:

- To rapidly increase immunization coverage.
- To improve the quality of services.
- To establish a reliable cold chain system to the health facility level.
- Monitoring of performance.
- To achieve self sufficiency in vaccine production.

- **Scope and eligibility:**
  - India has one of the largest Universal Immunization Programs (UIP) in the world in terms of the quantities of vaccines used, number of beneficiaries covered, geographical spread and human resources involved

  - Under the UIP, all vaccines are given free of cost to the beneficiaries as per the National Immunization Schedule.

- All beneficiaries' namely pregnant women and children can get themselves vaccinated at the nearest Government/Private health facility or at an immunization post (Anganwadi centres/ other identified sites) near to their village/urban locality on fixed days.

- The UIP covers all sections of the society across the country with the same high quality vaccines.

- **Achievements:**
  - The biggest achievement of the immunization program is the eradication of small pox.

  - One more significant milestone is that India is free of Poliomyelitis caused by Wild Polio Virus (WPV) .

  - Vaccination has contributed significantly to the decline in the cases and deaths due to the Vaccine Preventable Diseases (VPDs).

- **Coverage:**

  - As per the Coverage Evaluation Survey (CES-2009), 61% of children in the country are Fully Immunized with all vaccines.

THANK YOU


National Programme for Control of Blindness

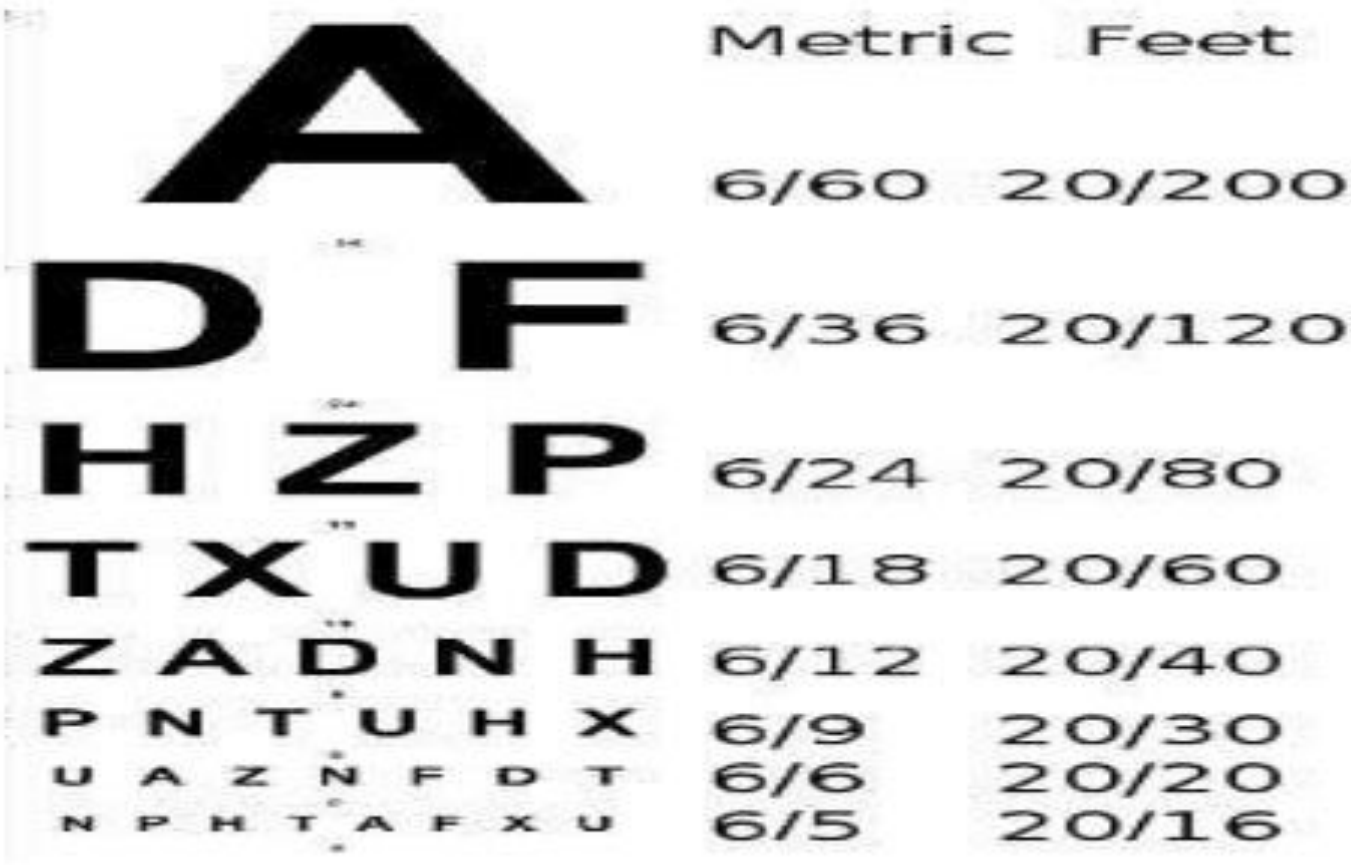
CAUSES OF BLINDNESS

- Cataract (62.6%) Refractive Error (19.70%) Corneal Blindness (0.90%), Glaucoma (5.80%), Surgical Complication (1.20%) Posterior Capsular Opacification (0.90%) Posterior Segment Disorder (4.70%), Others (4.19%).

- The WHO has defined blindness as "visual acuity of less than 3/60 (Snellen) or its equivalent", &

- nonspecialised personnel it is further described as "inability to count fingers in daylight at a distance of 3 meters". India has 6 million blind out of 38 million blind present in the world.

Snellen's chart



GLOBAL BURDEN OF BLINDNESS

As per WHO Statistics:-

- 285 million people visually impaired worldwide
- **39 million** are blind & **246 million** have low vision
- 82 % of people living with blindness are aged 50 & above.
- Globally uncorrected refractive errors are the main cause of visual impairment.
- Cataract remain the leading cause of blindness in middle & low income countries.

- 80% of all visual impairment can be prevented or cured.
- Prevalence is highest in Africa (1.2%) followed by Asia (0.75%) and Latin America (0.5%).

Introduction

- India was the first country in the world to launch National Level Blindness Control Programme.
- NPCB was launched in 1976 as a 100% centrally sponsored programme.
- In 1994-95 programme decentralized with formation of District Blindness Control Society in each district.
- Goal- to reduce the prevalence of blindness from 1.4 to 0.3% by 2020.

Objectives of NPCB

1)To continue 3 ongoing signature activities i.e., performance of 66 lacs cataracts operations per year; school eye screening & distribution of 9 lacs free spectacles per year for refractive errors; and collection of 50 thousand donated eyes per year for keratoplasty.

2)To reduce the backlog of avoidable blindness through identification and treatment at primary, secondary and tertiary levels.

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3) To develop comprehensive universal eye care services and quality service delivery.

4) Strengthening and upgradation of Regional Institutes of Ophthalmology to Centre of Excellance in various sub-specialities.

5) Strengthening of existing infrastructure facilities and to develop additional human resources for providing eye care in all districts.

Contd……..

6) To enhance community awareness on eye care.

7) To increase and expand research for prevention of blindness and visual impairment.

8)To secure participation of voluntary organizations/private practitioners in delivering eye care.

Activities under NPCB Programme

- Cataract operations
- Involvement of NGOs
- IEC activities
- Management Information System
- School Eye Screening Programme
- Collection and utilization of donated Eyes
- Control of Vitamin A deficiency
- Monitoring and Evaluation by survey

VISION 2020: Right to Sight

- Global initiative to reduce avoidable blindness (preventable and curable) by the year 2020.
- Target Diseases:

1. Cataract
2. Refractive errors
3. Childhood blindness
4. Corneal blindness(trachoma)
5. Glaucoma
6. Diabetic retinopathy

Externally Aided Projects

-WHO
-WORLD BANK
-DANIDA

- **World Bank assisted cataract blindness control project (1994-2002):**
- Implemented in 8 states.
- 15.35 million operations had been done against 11 million target.
- IOL implantation had been increased from 3% in 1993 to 75% in 2002.
- **Danish assistance to NPCB (1998-2003) :**
- Funds were utilized for the training , development of MIS, supply of equipment.

THANK YOU