

UNIT-3

Que-9

NATIONAL HEALTH PROGRAMME

Que-9 what are national health programs?

Introduction :- The National Health programme was launched by the Central Government for the following purposes :-

- Communicable disease eradication.
- Control of population and improving rural health.
- Raising the standards of nutrition.
- Improvement of environmental sanitation.

→ Technical and material support has been offered by numerous international organizations such as WHO, UNICEF and UNFPA to implement these programmes.

HEALTHCARE SERVICES

- Healthcare programmes are meant to enhance the health status of the community.
- In terms of morbidity reduction, the targets to be reached have been fixed.
- An increase in life expectancy.
- Nutritional status improvements.
- Decrease in the rate of population growth.

HEALTHCARE SYSTEMS

- Healthcare system is designed for the provision of healthcare services.
- It is represented in India by 5 major sectors

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or Companies that vary from each other through the application of health technology and it include : ↓

Public health sector, private sector, indigenous systems of medicine, voluntary health agencies, national health programmes.

Objectives of programme

- Achieving acceptable levels of good health in the Country's general population.
- Ensuring more equal access to healthcare through the Country's social and regional scope.
- To regulate the import, manufacture, distribution by licensing of drugs and cosmetics.
- Distribution, manufacturing and selling of drugs by eligible persons.

Que-10 write note on HIV/AIDS Control Programme.

① HIV AND AIDS CONTROL PROGRAMME

The National AIDS Control Programme (NACP) was launched in 1987.

NACP I - 1992-1997 ✓

NACP II - 1999-2004 ✓

NACP III - 2006-2011 ✓

NACP IV - 2012-2017 ✓

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Goals and objectives

Objective 1 :-

Reduce new infections by 50%. (2007 Baseline of NACP-III).

Objective 2 :-

Comprehensive care, support and treatment to all persons living with HIV/AIDS.

3 by 5 Initiative

- People living with HIV/AIDS in world : 40 million
- 3 by 5 target : Announced by WHO and UNAIDS on December 1, 2003.
- Interim Target : Providing anti-retroviral treatment (ART) to '3 million people living with HIV/AIDS', in developing countries (low & middle income), by end of 2005.
- Ultimate goal : Universal access to ART to anyone who needs it.

Focus areas : (Five pillars)

- Simplified standard tools to deliver ART.
- A new service to ensure effective, reliable supply of medicines and diagnostics.
- Dissemination and application of new knowledge and successful strategy.
- Urgent, sustained support to countries.
- Global leadership, backed by strong partnership.

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HIV Screening in NACP

Tests for Screening of HIV :-

- ELISA (E) Test ✓
- RAPID (R) Test ✓
- SIMPLE (S)

Test for Confirmatory diagnosis of HIV: Western Blot Assay.

Screening strategy of HIV

Strategy I :- One out of three screening tests (E/R/S) are used -

- Done for screening every blood unit before transfusion.
- Does not recommend its use for diagnosis of HIV in a person.

Strategy II :- Two out of three screening tests (E/R/S) are used.

- Done for screening person who is symptomatic with any one of AIDS defining illness (NACO guidelines).

Strategy III :- All three screening tests (E/R/S) are used -

- Done for screening person who is asymptomatic.

ELISA Test

First screening test commonly employed for HIV:-
- it has a high sensitivity

HIV Diagnosis Tests

① Western Blot Assay (Immunoblot):-

It is a method to detect a specific protein in a given sample of tissue homogenate or extract.

- used as a confirmatory test for HIV (NACP) India.
- Based on detecting :- viral core protein (p24) and envelope glycoprotein (gp11)

Mechanism of Western Blot Assay

- gel electrophoresis to separate native or denatured proteins.
- proteins transfer to a membrane (nitrocellulose or PVDF)
- Probe detection using antibodies specific to the target protein.

② p24 Antigen Test

- Detect the presence of the p24 protein of HIV.

③ Nucleic-acid-based test

- Amplify and detect a 142-base target sequence located in a highly conserved region of the HIV gag gene.

④ RT-PCR test :-

Viral RNA is extracted and is treated with reverse transcriptase \rightarrow PCR applied \rightarrow Amplified segments bind to specific oligonucleotides \rightarrow made visible with a probe bound to an enzyme.

⑤ Quantiplex bDNA or branched DNA test :-

Plasma centrifuged and opened to release its RNA \rightarrow special oligonucleotides are added to fasten RNA to wall \rightarrow amplify the signals oligonucleotides bound to an enzyme added \rightarrow the enzyme action causes a colour reaction which allows quantification of the viral RNA in the original sample.

Targeted Interventions in NACP

- Basic purpose :- To reduce transmission of HIV amongst most vulnerable populations.
- Approach :- Combines a comprehensive and integrated approach to vulnerable segments of population.
- Main activities :-
 - Behaviour change ✓
 - Communication ✓
 - Treatment of STD ✓
 - Create enabling environment to facilitate behavior change.

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Segments of population covered

- Sex workers ✓
- Injecting drug users ✓
- Truckers ✓
- Homosexual men ✓
- migrant labourers ✓
- street children ✓

Opt-in/opt-out Testing

- Opt-in testing :- Testing @ us offered and the patient is required to actively give permission before it can occur.
- Opt-out testing :- means performing an HIV test after notifying the patient that the test is normally performed, but that the patient may elect to decline or defer testing : assent is then assumed unless the patient declines testing.
 - WHO and CDC recommends opt-out testing policies in health care settings.
 - opt-out testing has a higher (85-98%) testing rate than opt-in testing (25-83%).
 - It does not eliminate the need for informed consent.

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LAC (LINK ART Centre)

↳ Anti-retroviral therapy.

- Providing ARV drugs to patients on ART
- Monitoring of patients on ART.
- Treatment of minor Opportunistic Infections.
- Identification and management of side-effects
- Reinforcement of drug adherence on every visit.

LAC PLUS (LAC services PLUS pre-ART management)

- Help in integrating HIV care into general health system.
- Reduce loss of patients b/w ICTC and care support and treatment (CST) services.

ALL IN Initiative

Global initiative to End Adolescent AIDS

- Description:- A partnership b/w UNAIDS and UNICEF to reach adolescents with HIV services and to end the AIDS epidemic by 2030.

four key action areas ! ↓

- Adolescents as leaders and actors of social change.
- Improving data collection.
- Encouraging innovative approaches to reach adolescents.
- Placing adolescents HIV firmly on political agenda.

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Fast track target to be achieved by 2020 :↓

- Reducing new HIV infections by at least 75%.
- Reducing AIDS related death by 65%.
- Achieving zero discrimination.

main goals :↓

- Ending adolescent AIDS by 2030.
- Ending the global AIDS epidemic as a public health threat.

Que-11 ~~Had~~ write Note on National T.B Control Programme.

NATIONAL TUBERCULOSIS CONTROL PROGRAMME

- The infectious disease commonly caused by the bacterium Mycobacterium Tuberculosis.
- TB affects the lungs mainly and caused Pulmonary tuberculosis.
- Active tuberculosis diagnosis is based on chest X-rays as well as on microscopic examination and body fluid culture.
- More than 10 million cases of active TB occurred in 2016, contributing to 1.3 million deaths.
- In developed countries, more than 95% of deaths occurred, and more than 50% occurred in India, China, Indonesia, Pakistan, and the Philippines.

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National Health programme for Tuberculosis and its functioning.

- In **1962**, the National Tuberculosis Programme (NTP) for TB control in India was initiated.
- Health education targeting the community and general practitioners is also stressed by the NTP.
To this end, Booklets, pamphlets, radio, TV and Newspaper ads are used.
- Founded in **1953** in Bangalore, the National Institute of Tuberculosis has been involved in research on epidemiological, sociological and organizational aspects, along with programme monitoring.
- The Revised National Tuberculosis Control Programme (RNTP) has undertaken early and firm steps towards its stated objective of universal access to early quality diagnosis and quality TB treatment for all TB patients.

National Strategic plan for 2012-2017

- The **2012-2017**, National Strategic plan (NSP) was included in the country's 12th five year plan.
- "universal access for quality care and treatment for all TB patients in the Nation" with an aim of "Reaching the unreached" was the theme of the NSP 2012-2017.
- The key focus was on the early and full

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diagnosis of all community-based TB cases, including drug-resistant TB and HIV associated TB, with greater private sector participation in improving treatment for all patients.

National Strategic plan for 2017-2025 for TB elimination in India.

- Building on the progress and leaving of the last NSP, the National Strategic plan 2017-2025 encapsulates the bold and imaginative steps needed to eradicate TB in India by 2030.
- It is built in line with other policies and global initiatives in health sector, such as the 2015 draught national health policy, the End TB strategy of the ~~united~~ WHO, and the UN Sustainable Development Goals.

Improving TB Surveillance by Transitioning to case Based, web Based Recording and Reporting (NIKSHAY)

- The information Communication technology application was launched on 15th may 2012, By National Informatics Centre and Central TB division.
- The data entry of individual TB cases is being done at the block level data entry operator of NHM.
- The System has been extended to include drug resistant TB cases, online referral and transfer of patients.

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TB Co-morbidities

- **TB and Diabetes**: The risk of TB among people with diabetes is 2-3 times higher than among those without diabetes.
- Diabetes can worsen the clinical course of TB, and TB can worsen glycaemic control in people with diabetes.
- **TB and Smoking**: Smoking increases the risk of TB 2-3 fold, and is associated with poor TB treatment results.
- High smoking prevalence in the population is an important contributor to high TB burden.

Objectives of TB Control Programme.

- To cure the TB patients.
- To prevent death from, or late effects of, active TB.
- To provide facilities for activities in training, teaching and research.
- To serve as an open institution for the prevention, control and treatment of TB and allied diseases in the region.
- To prevent the development of drug resistance.
- To reduce the transmission of TB to others.
- To have the country's TB surveillance system developed.
- To ensure correct diagnosis of TB and management of treatment and further speed up the reduction of transmission of TB.

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Outcomes of Programme

- Treatment success was achieved in 81% of new-smear-positive patients,
- 82% of new smear-negative patients,
- 89% of patients with extra-pulmonary TB,
- 70% of re-treatment patients.

Conclusion :- The RNTCP has successfully treated approximately 80% of patients in 20 districts of 15 states of India.

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Ques-9 write a note on National Leprosy control programme.

NATIONAL LEPROSY CONTROL PROGRAMME

National Control Programme for Leprosy and its functioning

- The national leprosy prevention programme of ministry of Health and family welfare of the Government of India is a centrally funded Health Scheme.
- Programme is headed by Deputy Health Services Director (Leprosy) under government of India.
- The programmes are also supported by the World Health Organization as a partner in May 1991.
- The world Health assembly adopted a resolution to eradicate global leprosy as a public Health issue by 2000.

Leprosy - it is a chronic infectious disease that is transmitted primarily by patients who are infected.

- *M. Leprae* primarily affects the peripheral nerves, the partial or absolute loss of the feeling ~~loss~~ of the skin in affected regions, the presence of thickened nerves and the presence of acid-fast bacilli in the skin or nasal smears.

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National Leprosy Programme

National leprosy control

- In **1955**, a programme is launched.
- In **1983**, launched National leprosy eliminated programme and induced multiple drug therapy.
- In **1993-2000** World Bank supported National leprosy eliminated program - I.
- In **2001-2004** World Bank supported NLEP - II.
- In **January, 2005** **NLEP** continued with the funds provided by Government of India funds and partners.

Objectives of National Leprosy Programme

- To achieve elimination of leprosy at national level by the end of the project.
- To accomplish integration of leprosy services with general health services in the 27 low endemic states.
- To proceed with integration of services as rapidly as possible in the 8 high endemic states.
- Elimination of leprosy.
- Strengthen Disability prevention and medical rehabilitation of persons affected by leprosy.
- Reduction in the level of stigma associated with leprosy.

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Outcomes of National Leprosy Programme

- ① Increase public awareness about leprosy.
- ② Increased No. of diagnoses and case self-reports.
- ③ The establishment of a Simplified Information System (SIS) for NLEP suitable for officials of the General Health Service helped to streamline the programme's data ~~generation~~ generation, reporting and tracking.
- ④ The leprosy systems moved from the east to centralized care across the main Health Services Centres while vertically operating the programme.
This has improved the service's accessibility on all working days for people closer to their Home.
- ⑤ Educate about leprosy and providing the patient, family and community members with health education.

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Ques-12 write Note on Pulse Polio Programme.

PULSE POLIO PROGRAMME

National Programme of Pulse Polio and it's functioning.

- Pulse Polio Programme is launched in 1995, in India.
- It is done twice each year.
- National Immunization Day is widely known as the Immunization schedule for pulse polio.
- Children aged 0-5 years are provided with polio drops each year during national and sub-national immunization programmes.
- During each National Immunization Day (NID), approximately 172 million children are immunized.
- On February 24, 2012, the World Health Organization removed the name of the Country (India) from the list of countries with active transmission of endemic wild polio viruses.

Principle for Polio Elimination

Polio is one of the few diseases that can be eliminated because :-

- ① It only affects humans and there are no animal reservoirs.
- ② The virus is only able to live in the

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atmosphere for a very short period.

- ③ There is a safe, inexpensive vaccine.

National programme of Pulse Polio and its functioning

- ① The pulse Polio programme launched in India in 1995, with an estimated 50,000 cases of polio annually.
- ② Case-based polio surveillance began in 1997 with funding from the National Monitoring Programme for the identification of polio virus transmission.
- ③ The last treatment for wild virus type-2 was recorded in India in 1999.
- ④ In 2005, India was the first country to use a monovalent (type-I) vaccine, and implement a ~~vibax~~ bivalent vaccine in 2010.

Functioning

- ① maintenance of community immunity each year by high quality national and sub-national polio rounds
- ② Develop Environmental observation to detect the transmission of polio virus.
- ③ Released guidelines for polio vaccination in March 2014

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- ④ India Switched from Trivalent Oral Polio Vaccine (TOPV) to the Bivalent Oral Polio Vaccine (BOPV) on April 25, 2016.
- ⑤ Identifying missing children from Immunization Process.
- ⑥ Monitoring of vaccination efficacy.
- ⑦ Vaccines are always kept in ~~ice~~ cold areas to protect them from degrading.

Strategies for Polio Elimination

- ① Routine immunization (oral polio vaccines in 0-1 year age - 3 doses)
- ② Supplementary Immunization Activities.
- ③ House to house activity.
- ④ Using pulse polio booth.

Objectives

- ① To become largest polio programme initiative in the world.
- ② To continue heavy screening and evaluation processes.
- ③ To start NGO's.
- ④ To improve the Quality of services.
- ⑤ To boost pulse polio Immunization programme.

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Outcomes of the Programme

- India was declared as a Polio free Nation by WHO on 27th March 2014.
- No case of polio has been identified for more than 3 years since the last treatment was identified on 13th January 2011.
- Polio free nation's credit goes to various NGO's, media, celebrities who promoted that programmes and played a ~~key~~ key role in bringing awareness among the people..

* Integrated Disease Surveillance Program (IDSP)

- The IDSP is a national health program launched in 2004.
- The program aims to establish a decentralized, state-based disease surveillance system to detect and respond to disease outbreaks in a timely and effective manner.

Objectives

- To strengthen the surveillance of communicable and non-communicable diseases in India.

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- To establish a decentralized, state-based surveillance system.
- To provide timely and effective response to outbreaks of diseases.
- To improve the capacity of health systems to respond to public health emergencies.

How it operates?

- IDSP operates at three levels:-
 - State
 - district
 - block
- At state level, the program is managed by the State Surveillance Unit (SSU).
- At district level, the program is managed by the District Surveillance Unit (DSU).
- At block level, managed by Block Surveillance Unit (BSU).

Functions

- case reporting
- outbreak investigations
- Data analysis
- Capacity building of health workers.
- The program also involves the use of technology such as mobile applications and web portals to improve the speed

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and accuracy of disease reporting and response.

Outcomes

The outcomes of IDSP has been mixed.

- The program has contributed to detection of and control of several diseases outbreaks such as H1N1 influenza, cholera, and dengue.
- It has also improved the quality of disease surveillance and reporting in India.

⇒ However, there have been some challenges such as :-

- Inadequate resources
- Poor quality of data.
- Lack of coordination among different levels of health system.

⇒ After these challenges, the IDSP remains an important national health program in India and efforts are ongoing to address its challenges and improve its outcomes.

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* National Mental Health Program (NMHP)

- The National Mental Health Program was launched in 1982.
- The aim of providing mental healthcare services to all citizens.
- The program is focused on :-
 - promoting mental health.
 - preventing mental illness
 - providing treatment and rehabilitation services for people with mental illness.

Objectives

- Ensure availability and accessibility of minimum mental healthcare for all.
- To encourage the integration of mental health into primary healthcare.
- To promote community participation in the planning, implementation, and monitoring of mental health services.
- To enhance human resources for mental health services.
- To encourage research in field of mental health.

Functions

- providing mental health services through primary healthcare centers, district hospitals, and medical colleges.

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- Conducting community-based interventions and awareness campaigns to promote mental health and prevent mental illness.
- Setting up ~~de~~ de-addiction centers to provide rehabilitation services for people with substance abuse problems.
- Training healthcare professionals and community health workers in the management of mental illness.
- Providing financial assistance to states for the development of mental health infrastructure.

Outcomes

- Significant progress in the development of mental health infrastructure and human resources.
- There are still significant gaps in the availability and accessibility of mental healthcare services.
- Stigma and discrimination towards people with mental illness continue to be a major challenge in India, and there is a need for greater community participation and awareness to address these issues.

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* National Programme for Prevention and Control of Deafness

- The most common sensory problem in humans is hearing loss.
- Prevention and control program for Deafness was developed by Government of India's ministry of Health and family welfare.
- 63 million people in India are distressed by this issue.

Components of programme

- ① Service provision :- - Early diagnosis and treatment.
- ② Awareness generation through IEC activities :-
 - For Early detection of hearing impairment, in particular children, so that it is possible to treat those cases in a timely manner and to eliminate the stigma attached to deafness.
- ③ Capacity building :- In relation to audiometric facilities for the district hospital, neighborhood health centres and primary health centres.
- ④ Manpower training and development :-
 - Education from medical college specialists to grass root staff will be provided for prevention, early detection and treatment of cases of hearing impairment and deafness.

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Functions

- ① Development of human resources for ear-treatment services.
- ② Developing the institutional capacities of district hospitals.
- ③ Promote public awareness.
- ④ Training to all the manpower.
- ⑤ Screening, early diagnosis and management.

Objectives

- ① Early detection, diagnosis and treatment.
- ② Prevent the avoidable loss of hearing due to illness.
- ③ Treat individuals of all age groups suffering from deafness medically.
- ④ Construct a hearing aid using digital signal process.
- ⑤ Identification of healthcare facilities and operations at the primary, middle and tertiary levels.

Outcomes

- ① Decrease in no. of people with hearing impairment.
- ② Reduction in stage of diff. ear conditions and hearing impairment.
- ③ Increased availability of Hospitals and treatment facilities.
- ④ Improved support network for the hearing impaired.
- ⑤ Increased capacity building to ensure better treatment and facilities at the district hospitals.

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* Universal Immunization Programme [UIP]

- The UIP is one of the national Health programs in India.
- It was launched in 1985.
- The objective of reducing morbidity and mortality due to vaccine-preventable diseases.
- The program provides free vaccination to all children in the country.
- The UIP provides vaccines for 12 vaccine-preventable diseases, which include 8-
Tuberculosis, Polio, Hepatitis B, Diphtheria, Pertussis, Tetanus, measles, Rubella, Japanese encephalitis, Rotavirus, Pneumococcal disease, Haemophilus influenzae type B (Hib).
- The vaccines are provided through a network of primary health centers, community health centers, and district hospitals.
- The program aims to achieve full immunization coverage of all children in the country by the age of two years.
- Over the years, the UIP has made significant progress in increasing immunization coverage in the country.
- According to National Family Health Survey-5

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(NFHS-5) Conducted in 2019-2020, the percentage of children aged 12-23 months who received all basic vaccinations under the UIP was 62.3%.

- This is an ~~important~~ improvement from 44% in NFHS-4 conducted in 2015-16.
- Despite the progress, The UIP still faces challenges in achieving full immunization coverage.
- The reasons include vaccine hesitancy, inadequate infrastructure, and insufficient human resources.
- The program also needs to focus on improving the quality of vaccination services and addressing issues related to vaccine supply chain management.

* National Program for Control Blindness

- Program is launched in 1976.
- The objective of reducing the prevalence of blindness and visual impairment.
- The NPCB aims to provide comprehensive eye care services, prevent blindness and rehabilitate visually impaired individuals.

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The program focuses on the following key strategies :-

① Strengthening of eye care infrastructure

- The program aims to strengthen the infrastructure for eye care services, including hospitals, eye banks and vision centres.
- It also focuses on the training of eye care personnel and the development of human resources for eye care services.

② Promotion of eye health :-

- Create awareness about eye health and the prevention of eye diseases.
- Also focuses on promotion of eye health through school health programs, workplace health programs, and community based programs.

③ Detection and treatment of eye diseases :-

- Aims to detect and treat eye diseases through a network of eye care facilities, primary health centres, district hospitals, and specialized eye care centers.
- Also provide free treatment for cataract, which is a leading cause of blindness in India.

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④ Rehabilitation of visually impaired individuals:-

- provides rehabilitation services for visually impaired individuals, including the provision of assistive devices such as spectacles, low vision aids, and Braille devices.
 - The program also provides vocational and employment opportunities for visually impaired individuals.
- ⇒ The NPCB has made significant progress in reducing the burden of blindness in India.
- ⇒ According to the latest survey conducted in 2019-2020, the prevalence of blindness in India has reduced from 1.1% in 2001-2002 to 0.5% in 2019-2020.
- ⇒ The program has also increased the availability of eye care services and has provided treatment for cataract to a large no. of individuals.