REEVENT HEALTH PROGRAMMES

PAPER-V PAPER CODE- CPH405 UNIT-III

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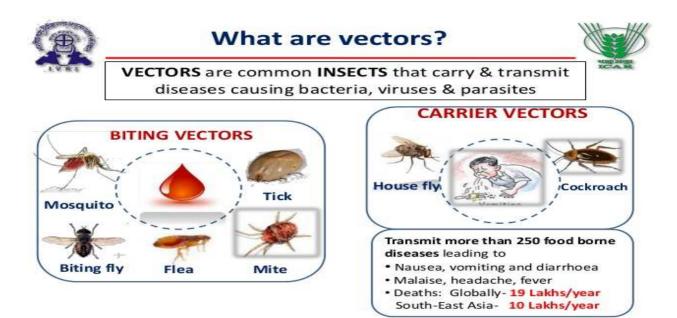
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3.2 Vector Born Diseases Control Programme, Diarrhoea Management Programme- Objective, Initiative and Achievement

Vector Born Diseases Control Programme: Vectors:

Vectors are living organisms that can transmit infectious pathogens between humans, or from animals to humans. Many of these vectors are bloodsucking insects, which ingest disease-producing microorganisms during a blood meal from an infected host (human or animal) and later transmit it into a new host, after the pathogen has replicated. Often, once a vector becomes infectious, they are capable of transmitting the pathogen for the rest of their life during each subsequent bite/blood meal

Launched in 2003-04 by merging National anti -malaria control programme ,National Filaria Control Programme and Kala Azar Control programmes .Japanese B Encephalitis and Dengue/DHF have also been included in this Program Directorate of NAMP is the nodal agency for prevention and control of major Vector Borne Diseases.



List of Vector Borne Diseases Control Programme Legislations:

- 1) National Anti Malaria programme
- 2) Kala Azar Control Programme
- 3) National Filaria Control Programme
- 4) Japenese Encephilitis Control Programme
- 5) Dengue and Dengue Hemorrhagic fever

1) NATIONAL ANTI - MALARIA PROGRAMME

Malaria: Malaria is one of the serious public health problems in India. At the time of independence malaria was contributing 75 million cases with 0.8 million deaths every year prior to the launching of National Malaria Control Programme in 1953. A countrywide comprehensive programme to control malaria was recommended in 1946 by the Bhore committee report that was endorsed by the Planning Commission in 1951. The national programme against malaria has a long history since that time. In April 1953, Govt. of India launched a National Malaria Control Programme (NMCP).

Objective:

 To bring down malaria transmission to a level at which it would cease to be a major public health problem.

2) KALA -AZAR CONTROL PROGRAMME

Kala-azar or visceral leishmaniasis (VL) is a chronic disease caused by an intracellular protozoan (Leishmania species) and transmitted to man by bite of female phlebotomus sand fly. Currently, it is a main problem in Bihar, Jharkhand, West Bengal and some parts of Uttar Pradesh. In view

of the growing problem planned control measures were initiated to control kala-azar.

Objectives:

The strategy for kala-azar control broadly included three main activities.

- Interruption of transmission by reducing vector population through indoor residual insecticides.
- Early diagnosis and complete treatment of Kala-azar cases; and
- Health education programme for community awareness.

3) NATIONAL FILARIA CONTROL PROGRAMME

Bancroftian filariasis caused by Wuchereria bancrofti, which is transmitted to man by the bites of infected mosquitoes - Culex, Anopheles, Mansonia and Aedes. Lymphatia filaria is prevalent in 18 states and union territories. Bancroftian filariasis is widely distributed while brugian filariasis caused by Brugia malayi is restricted to 7 states - UP, Bihar, Andhra Pradesh, Orissa, Tamil Nadu, Kerala, and Gujarat. The National Filaria Control Programme was launched in 1955. The activities were mainly confined to urban areas. However, the programme has been extended to rural areas since 1994.

Objectives:

- Reduction of the problem in un-surveyed areas
- Control in urban areas through recurrent anti-larval and antiparasitic measures.

4) JAPANESE ENCEPHALITIS CONTROL PROGRAMME

Japanese encephalitis (JE) is a zoonotic disease and caused by an arbovirus, group B (Flavivirus) and transmitted by Culex mosquitoes. This disease has been reported from 26 states and UTs since 1978, only 15 states are reporting JE regularly. The case fatality in India is 35% which can be reduced by early detection, immediate referral to hospital and proper medical and nursing care. The total population at risk is estimated 160 million. The most disturbing feature of JE has been the regular occurrence of outbreak in different parts of the country.

Govt. of India has constituted a Task Force at National Level which is in operation and reviews the JE situations and its control strategies from time to time. Though Directorate of National Anti-Malaria Programme is monitoring JE situation in the country.

Objectives:

- Strengthening early diagnosis and prompt case management at PHCs, CHCs and hospitals through training of medical and nursing staff.
- IEC for community awareness to promote early case reporting, personal protection, isolation of amplifier host, etc.;
- Vector control measures mainly fogging during outbreaks, space spraying in animal dwellings, and antilarval operation where feasible; and
- Development of a safe and standard indigenous vaccine.
 Vaccination for high risk population particularly children below 15 years of age.

5) DENGUE AND DENGUE HEMORRHAGIC FEVER

One of the most important resurgent tropical infectious disease is dengue. Dengue Fever and Dengue Hemorrhagic Fever (DHF) are acute fevers caused by four antigenically related but distinct dengue virus serotypes (DEN 1,2,3 and 4) transmitted by the infected mosquitoes, Aedes aegypti. Dengue outbreaks have been reported from urban areas from all states. All the four serotypes of dengue virus (1,2,3 and 4) exist in India. The Vector Aedes Aegypti breed in peridomestic fresh water collections and is found in both urban and rural areas.

Objectives:

- Surveillance for disease and outbreaks
- Early diagnosis and prompt case management
- Vector control through community participation and social mobilization
- · Capacity building

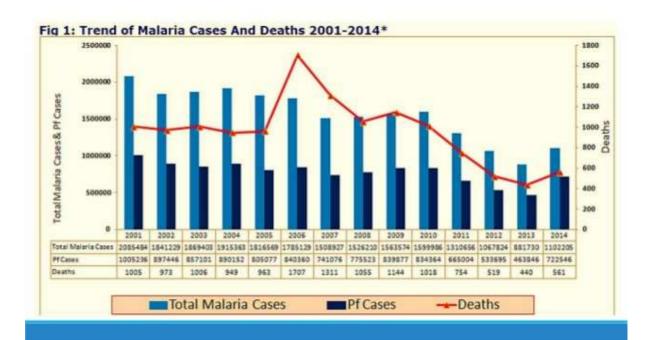
Initiative:

The Government of India is implementing National Vector Borne Disease Control Programme in the country for prevention & control of six vector borne diseases namely Malaria, Japanese Encephalitis, Dengue, Chikungunya, Kala-azar and Filaria. The States/UTs implement the programme activities and the technical guidance as well as financial assistance is provided by Government of India. The general strategy for prevention & control of Vector Borne Diseases is as below:

- Malaria cases are detected by active and passive surveillance with the help of direct microscopy or Rapid diagnostic kits and are treated as per guideline.
- Kala-azar cases are also detected by active search and passive surveillance with the help of RDK and all positive cases are treated by single dose of Inj. Liposomal Amphotericine-B or combination of drugs.
- Integrated Vector Management including Indoor Residual Spray (IRS), Anti-larval measures including use of bio-larvicides, use of larvivorous fish and use of Long Lasting Insecticidal Nets (LLINs).
- > Supportive Interventions including Behavior Change Communication, Capacity Building and Monitoring & Evaluation.
- > Vaccination against J.E.
- > Annual Mass Drugs Administration (only for Lymphatic Filariasis).

Achievements:

- > Eradication of Small pox, Guinea worm and Polio.
- ➤ Elimination of Leprosy and Yaws.\
- ➤ Containment of diseases like Avian Influenza, H 1 N1, CCHF, Plague, Leptospirosis.
- > Cholera, widely prevalent was brought under control through focused action.
- ➤ Public health burden of diseases like Malaria, trachoma, filarial, Kala-Azar got substantially reduced.
- > Major initiatives began to control tuberculosis.



Diarrhoea Management Programme:

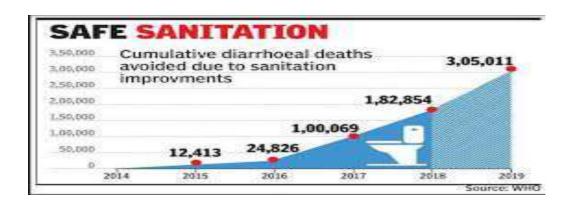
Diarrhoeal disease is the second leading cause of death in children under five years old, and is responsible for killing around 525 000 children every year. Diarrhoea can last several days, and can leave the body without the water and salts that are necessary for survival. In the past, for most people, severe dehydration and fluid loss were the main causes of diarrhoea deaths. Now, other causes such as septic bacterial infections are likely to account for an increasing proportion of all diarrhoea-associated deaths. Children who are malnourished or have impaired immunity as well as people living with HIV are most at risk of life-threatening diarrhoea.

Diarrhoea is defined as the passage of three or more loose or liquid stools per day (or more frequent passage than is normal for the individual). Frequent passing of formed stools is not diarrhoea, nor is the passing of loose, "pasty" stools by breastfed babies.

Diarrhoea is usually a symptom of an infection in the intestinal tract, which can be caused by a variety of bacterial, viral and parasitic organisms. Infection is spread through contaminated food or drinkingwater, or from person-to-person as a result of poor hygiene.

There are three clinical types of diarrhoea:

- acute watery diarrhoea lasts several hours or days, and includes cholera;
- acute bloody diarrhoea also called dysentery; and
- persistent diarrhoea lasts 14 days or longer.



Causes:

Infection: Diarrhoea is a symptom of infections caused by a host of bacterial, viral and parasitic organisms, most of which are spread by faeces-contaminated water. Infection is more common when there is a shortage of adequate sanitation and hygiene and safe water for drinking, cooking and cleaning. Rotavirus and Escherichia coli, are the two most common etiological agents of moderate-to-severe diarrhoea in Other low-income countries. pathogens such as cryptosporidium and shigella species may also be important. Location-specific etiologic patterns also need to be considered.

Malnutrition: Children who die from diarrhoea often suffer from underlying malnutrition, which makes them more vulnerable to diarrhoea. Each diarrhoeal episode, in turn, makes their malnutrition even worse. Diarrhoea is a leading cause of malnutrition in children under five years old.

Source: Water contaminated with human faeces, for example, from sewage, septic tanks and latrines, is of particular concern. Animal faeces also contain microorganisms that can cause diarrhoea.

Other causes: Diarrhoeal disease can also spread from person-to-person, aggravated by poor personal hygiene. Food is another major cause of diarrhoea when it is prepared or stored in unhygienic conditions. Unsafe domestic water storage and handling is also an important risk factor. Fish and seafood from polluted water may also contribute to the disease.

Objective:

- ➤ To promote national policies and investments that support case management of diarrhoea and its complications as well as increasing access to safe drinking-water and sanitation in developing countries.
- > Toconduct research to develop and test new diarrhoea prevention and control strategies in this area;
- > To build capacity in implementing preventive interventions, including sanitation, source water improvements, and household water treatment and safe storage.
- > Todevelop new health interventions, such as the rotavirus immunization.
- > To help to train health workers, especially at community level.

Initiative and achievement:

- Access to safe drinking-water
- Use of improved sanitation
- > Hand washing with soap
- > Exclusive breastfeeding for the first six months of life.
- Good personal and food hygiene

- > Health education about how infections spread.
- > Rotavirus vaccination.
- ➤ Rehydration: with oral rehydration salts (ORS) solution. ORS is a mixture of clean water, salt and sugar. It costs a few cents per treatment. ORS is absorbed in the small intestine and replaces the water and electrolytes lost in the faeces.
- ➤ Zinc supplements: zinc supplements reduce the duration of a diarrhoea episode by 25% and are associated with a 30% reduction in stool volume.
- Rehydration: with intravenous fluids in case of severe dehydration or shock.
- ➤ Nutrient-rich foods: the vicious circle of malnutrition and diarrhoea can be broken by continuing to give nutrient-rich foods including breast milk during an episode, and by giving a nutritious diet including exclusive breastfeeding for the first six months of life to children when they are well.
- ➤ Consulting a health professional , in particular for management of persistent diarrhoea or when there is blood in stool or if there are signs of dehydration.

3.3 Sexually Transmitted Diseases and HIV/ AIDS Control Programme

Sexually Transmitted Diseases:

The term sexually transmitted disease (STD) is used to refer to a condition passed from one person to another through sexual contact. You can contract an STD by having unprotected vaginal, anal, or oral sex with someone who has the STD. An STD may also be called a sexually transmitted infection (STI) or venereal disease (VD). That doesn't mean sex is the only way STDs are transmitted. Depending on the specific STD, infections may also be transmitted through sharing needles and breastfeeding.

Symptoms of STDs in men:

It's possible to contract an STD without developing symptoms. But some STDs cause obvious symptoms. In men, common symptoms include:

- > Pain or discomfort during sex or urination
- Sores, bumps, or rashes on or around the penis, testicles, anus, buttocks, thighs, or mouth
- Unusual discharge or bleeding from the penis
- > Painful or swollen testicles

Symptoms of STDs in women

In many cases, STDs don't cause noticeable symptoms. When they do, common STD symptoms in women include:

- > Pain or discomfort during sex or urination
- Sores, bumps, or rashes on or around the vagina, anus, buttocks, thighs, or mouth
- > Unusual discharge or bleeding from the vagina

➤ Itchiness in or around the vagina

Sexually Transmitted Disease Control Programmes: Clinical services

Clinical interventions can be broadly categorized as STI management approaches for symptomatic patients, screening for asymptomatic infections and partner strategies. All should be supported by appropriate efforts to educate, counsel and provide the means, such as condoms, to prevent infection.

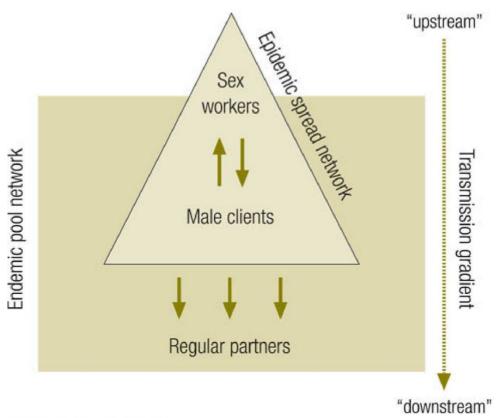
Primary prevention

STI control cannot be achieved by means of clinical interventions alone. Primary prevention interventions at the clinic and outside, where transmission takes place, are required. Such interventions emphasize the means of prevention, information and referrals to clinical services. There is strong evidence that male latex condoms reduce transmission of HIV by at least 80–85%, are effective against most other STIs and reduce the risk of unintended pregnancy. Other barrier methods, such as the female condom, may have advantages over the male condom in some situations, or as backup methods

Targeting high-risk populations

Primary prevention and clinical services contribute synergistically to STI control. The success of these efforts depends not on reaching all people but on reaching the right people with effective interventions. If there is a fundamental tenet of STI control, it is that transmission depends on high rates of sexual partner change. Epidemics are sustained "upstream" in relatively small sub-

groups of the population where rates of sexual partner change are sufficient to sustain high incidence (Fig. 1). Secondary or "downstream" transmission accounts for infections among people at lower risk. An important corollary is that prevention efforts that effectively reduce transmission in the high-partner "core" population are necessary, and often sufficient, to reduce transmission in the population at large.



STI, sexually transmitted infection.

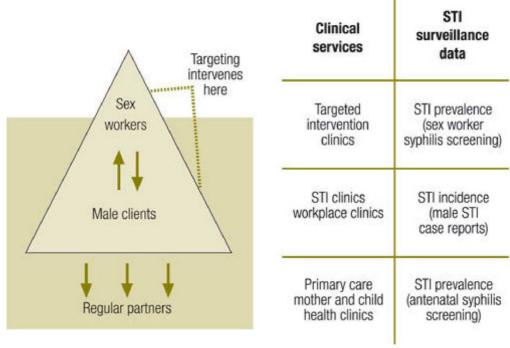
Measuring STI control

STIs are reliable markers of HIV transmission that should be monitored to assess effectiveness of combined prevention efforts. Feasible methods, based on case reporting and periodic surveys, can identify areas where STI control is poor and provide outcome data needed to monitor programme performance. Surveillance should be

based on routine STI case reporting, supplemented with special surveys of STI and HIV prevalence, assessment of STI syndrome etiologies, antimicrobial resistance monitoring and risk behaviour prevalence. It is also important to monitor coverage of STI services, particularly for priority population groups.

Implications for programmes

What are the implications for STI control and HIV prevention programmes? If broader STI control is important for HIV prevention, how can this be achieved? What are the conditions where investment in STI control is most likely to contribute to slowing HIV epidemics? Table 1 follows standard epidemiological parameters of disease control to address these questions.



STI, sexually transmitted infection.

HIV/ AIDS Control Programme

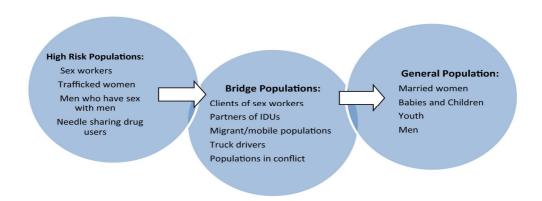
India's AIDS Control Programme is globally acclaimed as a success story. The **National AIDS Control Programme (NACP)**, launched in 1992, is being implemented as a comprehensive programme for prevention and control of HIV/AIDS in India. Over time, the focus has shifted from raising awareness to behavior change, from a national response to a more decentralized response and to increasing involvement of NGOs and networks of PLHIV.

In 1992, the Government launched the first National AIDS Control Programme (NACPI) with an IDA Credit of USD84 million and demonstrated its commitment to combat the disease. NACP I was implemented with an objective of slowing down the spread of HIV infections so as to reduce morbidity, mortality and impact of AIDS in the country. National AIDS Control Board (NACB) was constituted and an autonomous National AIDS Control Organization (NACO) was set up to implement the project. The first phase focused on awareness generation, setting up surveillance system for monitoring HIV epidemic, measures to ensure access to safe blood and preventive services for high risk group populations.

In November 1999, the second National AIDS Control Project (NACP II) was launched with World Bank credit support of USD 191 million. The policy and strategic shift was reflected in the two key objectives of NACP II: (i) to reduce the spread of HIV infection in India, and (ii) to increase India's capacity to respond to HIV/AIDS on a long-term basis. Key policy initiatives taken during NACP II included: adoption of National AIDS Prevention and Control Policy (2002); Scale up of Targeted Interventions for High risk groups in high prevalence states;

Adoption of National Blood Policy; a strategy for Greater Involvement of People with HIV/AIDS (GIPA); launch of National Adolescent Education Programme (NAEP); introduction of counseling, testing and PPTCT programmes; Launch of National Anti-Retroviral Treatment (ART) programme; formation of anointer-ministerial group for mainstreaming; and setting up of the National Council on AIDS, chaired by the Prime Minister; and setting up of State AIDS Control Societies in all states.

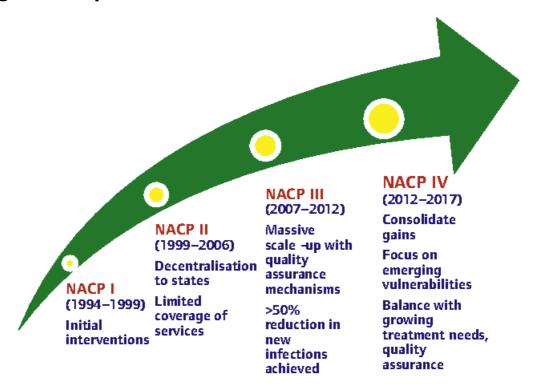
In response to the evolving epidemic, the third phase of the national programme (NACPIII) was launched in July 2007 with the goal of Halting and Reversing the Epidemic by the end of project period. NACP was a scientifically well-evolved programme, grounded on a strong structure of policies, programmes, schemes, operational guidelines, rules and norms. NACP-III aimed at halting and reversing the HIV epidemic in India over its five-year period by scaling up prevention efforts among High Risk Groups (HRG) and General Population and integrating them with Care, Support & Treatment services. Thus, Prevention and Care, Support & Treatment (CST) form the two key pillars of all the AIDS control efforts in India. Strategic Information Management and Institutional Strengthening activities provide the required technical, managerial and administrative support for implementing the core activities under NACP-III at national, state and district levels.



The National AIDS Control Organisation (NACO) under Department of AIDS Control of the Ministry of Health and Family Welfare is the overall body for framing policy, guidelines and strategies for program implementation. It also releases funds to various states and reviews the progress under various components of the program.

State AIDS Control Societies (SACS) have been constituted throughout the country with the responsibility of program implementation. In high HIV prevalent districts, District AIDS Prevention Control Unit (DAPCU) has been set up for direct supervision at the ground level.

Program Components:



Targeted interventions

HIV epidemic in India is mainly concentrated in high-risk population like female sex workers (FSW), men having sex with men

(MSM), injecting drug users (IDU) and clients of sex workers. Given their special vulnerabilities, prevention strategies include five elements – behaviour change, treatment for sexually transmitted infections (STI), monitoring access to and utilization of condoms, ownership building and creating an enabling environment. Prevention strategy of NACP-III includes peer led interventions by Non-Governmental Organizations

Management of STI

STI and Reproductive Tract Infections (RTI) are key determinants of HIV transmission. An estimated 6% of adult population suffers from STI/RTI annually, accounting for about 30 million episodes per year. Presence of STI increases the risk of acquisition and transmission of HIV infection five to ten times. Control of STI provides a window of opportunity for prevention of new HIV infection and is the most cost-effective means for preventing HIV transmission. Provision of standardized package of STI/RTI services through syndromic case management by public health facilities and preferred private practitioners is the cornerstone of the program. Pre-packaged, color-coded syndromic drug kits are being supplied through the program to ensure compliance to treatment.

Condom promotion

Condom promotion strategy aims to integrate the use for family planning as well as prevention of HIV and STI using various channels of supply, i.e. free, through social marketing and commercial outlets. In addition, various innovative approaches have been introduced including Condom Vending Machines (CVMs) at strategic sites, female condoms particularly for FSW and special condoms for MSM population.

Blood safety

Blood Safety program under NACP-III aims to ensure provision of safe and quality blood to the far-flung remote areas of the country in the shortest possible time through a well-coordinated National Blood Transfusion Service. This is sought to be achieved by the following:

- Strengthening infrastructural facilities and establishing blood storage centers in the primary health care system for availability of blood in far-flung remote areas;
- Ensuring that regular (repeat) voluntary non-remunerated blood donors constitute the main source of blood supply through phased increase in donor recruitment and retention;
- Vigorously promoting appropriate use of blood, blood components and blood products among the clinicians;
- Developing long-term policy for capacity building to achieve efficient and self-sufficient blood transfusion services;
- Mandatory testing of each unit of blood for HIV, Hepatitis B and C,
 Syphilis and Malaria and
- Voluntary blood donation for which camps are organized with the help of various organizations.

Integrated counseling and testing services

Counseling and HIV testing services are being provided through 5223 Integrated Counselling and Testing Centres (ICTC) mainly located in

government hospitals. These services are also being expanded in PHC/CHC in the rural areas, private sector facilities and mobile clinics.

The main functions of an ICTC include HIV diagnostic tests, counseling and promoting behavioral change and referral for care and treatment services. The ICTC services are accessed by voluntary clients (who visit the ICTC on their own), provider initiated client testing including patients with signs/symptoms of HIV infection, patients with STI/RTI/TB and pregnant women visiting antenatal clinics.

Care, support and treatment

The care, support and treatment needs of HIV positive people vary with the stage of the infection. The HIV infected person remains asymptomatic for 6-8 years. As immunity falls over time, the person becomes susceptible to various Opportunistic Infections (OIs). At this stage, medical treatment and psychosocial support are needed. ART and prompt diagnosis and treatment of OIs improve the survival and quality of life.

Information, education, communication and mainstreaming

Information, Education and Communication (IEC) cuts across all program components of NACP-III.(2) There has been a strategic shift in IEC strategy during NACP-III, with the focus moving on to behavior change communication from just awareness creation during NACP-II.

Strategic information management system

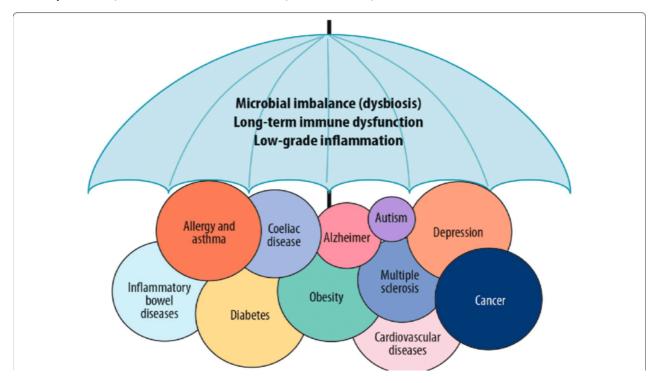
India's response to HIV epidemic is governed by the strategic information derived from HIV Sentinel Surveillance, routine program

monitoring data, operational research and evaluation studies. A nationwide web-enabled Strategic Information Management System (SIMS) has been set up to empower program management at various levels with the information required for planning, management and monitoring purposes. This system also helps in evidence-based policy formulation and program planning.

3.4 Programme Related to Control and Prevention of Non Communicable Diseases

Non Communicable Diseases (NCDs)

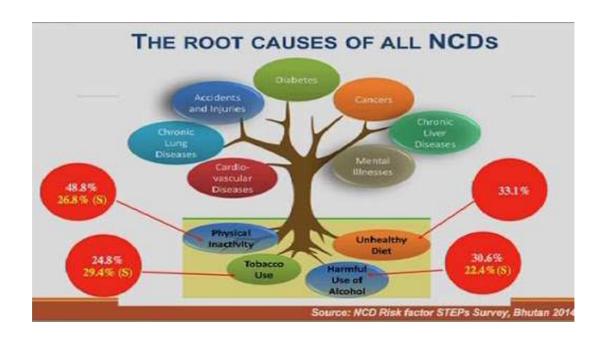
A non-communicable disease (NCD) is a disease that is not transmissible directly from one person to another. NCDs include Parkinson's disease, autoimmune diseases, strokes, most heart diseases, most cancers, diabetes, chronic kidney disease, osteoarthritis, osteoporosis, Alzheimer's disease, cataracts, and others.

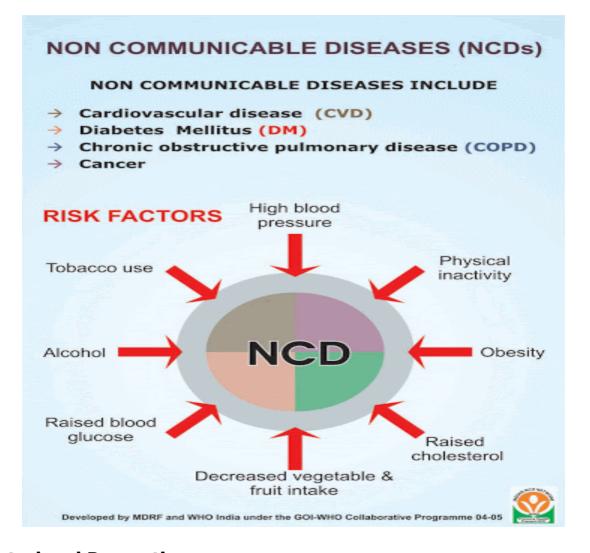


The major NCDs are cardiovascular diseases, cancers, chronic respiratory diseases and diabetes. Physical inactivity, unhealthy diets (diets low in fruit, vegetables, and whole grains, but high in salt and fat), tobacco use (smoking, secondhand smoke, and smokeless tobacco), and the harmful use of alcohol are the main behavioural risk factors for NCDs.

They contribute to raised blood pressure (hypertension); raised blood sugar (diabetes); raised and abnormal blood lipids (dyslipidaemia); and obesity. Air pollution is also leading risk factor for NCDs in terms of both outdoor air pollution and household air pollution that mainly results from burning solid fuels in the home for cooking and heat.

Although morbidity and mortality from NCDs mainly occur in adulthood, exposure to risk factors begins in early life. Therefore, NCDs and its risk factors have great importance to young people as well. NCDs are rapidly increasing globally and reached epidemic proportions in many countries, largely due to globalization, industrialization, and rapid urbanization with demographic and lifestyle changes.





Control and Prevention:

- > The epidemic of NCDs cannot be halted simply by treating the sick, healthy persons have to be protected by addressing the root causes. Reducing the major risk factors for NCDs is the key focus of MOHFW to prevent deaths from NCDs. Tackling the risk factors will therefore not only save lives; it will also provide a huge boost for the economic development of the country.
- MOHFW, GOI is already implementing "National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular disease and Stroke" (NPCDCS) with the objective to increase awareness on risk factors, to set up infrastructure (like NCD clinics, cardiac care

- units) and to carry out opportunistic screening at primary health care levels.
- > In response to the "WHO Global Action Plan for the Prevention and Control of NCDs 2013-2020", India is the first country to adopt the National Action Plan with specific national targets and indicators aimed at reducing the number of global premature deaths from NCDs by 25% by 2025. The global action plan has suggested 9 targets for countries to set. But India has taken the unprecedented step of setting a tenth target to address household air pollution. India's National Monitoring Framework for Prevention and Control of NCDs has committed for a 50% relative reduction in household use of solid fuel and a 30% relative reduction in prevalence of current tobacco use by 2025.
- > Integration of NPCDCS with the National Health Mission (NHM) resulted into augmented infrastructure and human resources particularly in the form of frontline workers- the ANM and the ASHA. With the active participation of these frontline workers the population-based periodic screening of hypertension, diabetes, and common cancers (oral, breast, cervical cancers) is initiated to facilitate the early detection of common NCDs.
- Prevention and management of chronic obstructive pulmonary disease (COPD) and chronic Kidney disease (CKD); and better management of co-morbidities such as diabetes and tuberculosis are also considered under the programme.
- > Integration of AYUSH with NPCDCS is a further step for promoting healthy life style changes among the population. Health promotion through social media is also being used to generate awareness

- about prevention and control of NCDs, such as use of mobile technology in applications called **mDiabetes** for diabetes control, **mCessation** to help for quit tobacco, and no more tension as a support for mental stress management.
- All people should join together to reduce premature deaths from NCDs by one third by 2030, the commitment made in 2015, as a part of Sustainable Development Goals. Young people can contribute in different ways to prevent NCDs such as sharing information/ targeted messages on key risk factors about NCDs on social media; organizing and supporting interventions to ensure healthy lives and promote wellbeing for all people, at all ages.

Unite in the fight against NCDs:

