

NATIONAL SURVEILLANCE PROGRAMME FOR COMMUNICABLE DISEASES

Introduction

- The Disease Burden of the people of India is one of the highest in the world. This is mainly due to the heavy burden of infectious diseases. We have a triple burden of infectious disease. Firstly, we have those infectious diseases that are prevalent worldwide and for which specific preventive measures are yet not available. Secondly, we have infectious diseases that are prevalent because of insufficient public health measures. In industrialized nations such diseases were once rampant, but they have been controlled with the efficient application of the principles of public health. Thirdly, diseases perpetuated by the prevalence of vector as well as vertebrate fauna, and the ecological determinants which are specific to our geo-climatic features.
- Diseases due to infections or specific toxins are more easily preventable since a single extraneous agent causes them, even though their transmission may be complex. Non-infectious diseases tend to be multifactorial and are therefore, less easily amenable to control measures. It can be concluded logically, that the control of infectious diseases are of immediate high priority because they are more common and preventable.

Surveillance in Disease Control

- A systematic process of reporting of various diseases of public health importance, as and when, and where, they occur, to a designated agency responsible for taking effective interventional steps, is known as **disease surveillance**. Its success will depend upon 3R i.e., the quality of diagnosis (Recognition), the timeliness and completeness of Reporting, and analysis and effectiveness feedback Response.
- Infectious diseases occur as a result of amplification and transmission of infectious agents. Detecting disease, as, when and where it occurs, and it's clustering, are essential for disease control. Surveillance, in other words, is the first step in intervention. Surveillance is particularly important for the early detection of outbreaks of diseases. In the absence of surveillance, disease may spread unrecognized. By the time the outbreak is recognized, the best opportunity to take intervention measures might have been over.
- Surveillance is essential for the early detection of emerging (new) or re-emerging (resurgent) infectious diseases. In the absence of surveillance, individual health care workers may not recognize the new disease, but may apply a near-fit diagnosis of a locality prevalent disease, which the disease in question may resemble.
- The eradication of poliomyelitis require systematic surveillance of acute flaccid paralysis in every part of the country. Measles will be targeted for eradication in near future; once again surveillance for measles will therefore become imperative. Instead of establishing single-disease surveillance one at a time, the opportunity must be seized to develop comprehensive disease surveillance for effective disease control.
- Having recognized the crucial importance of disease surveillance for improving the health of our people, the Government of India constituted a National Apical Advisory Committee for National Disease surveillance and Response System. The Govt. of India has launched National Surveillance Program for Communicable Diseases (NSPCD) during 1997-98.

Objectives

- 1. Capacity building at the state and district for early identification of outbreaks of communicable diseases, and

2. Appropriate and timely response to the outbreaks of communicable diseases.

Programme Activities

- The state governments through their existing infrastructure are implementing the programme. Under the programme, following activities are:
 1. Surveillance system is strengthened through training of medical and paramedical personnel
 2. Dissemination of technical information and guidelines.
 3. Up gradation of laboratories.
 4. Modernization of communicable and data processing systems, and
 5. IEC activities to promote community participation in the prevention and control of outbreaks.

- Reportable disease should be prioritized based on sound principles. First those diseases targeted for eradication, elimination or control, using specific interventions already being applied are of high priority. Secondly, those diseases that could be controlled locally, especially in outbreak situations, and against which effective interventions tactics already exist, are to be reported under the surveillance system. Thirdly, diseases for which epidemiological information is directly needed in order to design control strategy, are also to be included in the list.

Prioritizing Diseases for Surveillance

- Except the diseases for which already surveillance is carried out there is a need to prioritize the diseases for comprehensive surveillance:
 1. Acute Flaccid Paralysis*
 2. AIDS*
 3. Chicken pox
 4. Cholera like diarrhea
 5. Diphtheria
 6. Dysentery
 7. Encephalitis
 8. Fever syndrome more than 6 days
 9. Hemorrhagic fever
 10. Hepatitis
 11. Herpes zoster
 12. Leprosy*
 13. Malaria: falciparum and vivax*
 14. Measles
 15. Meningitis: non-pyogenic and pyogenic
 16. Mumps
 17. Rabies
 18. Rheumatic fever
 19. Tetanus neonatorum*
 20. Tetanus in older age
 21. TB in older age and pulmonary*
 22. Whooping cough
 23. Any other of public health importance

- * For these diseases the nation already has national programmes and some sort of surveillance is carried out under these programmes that need to be strengthened.

- Once the surveillance system is established and runs well for communicable diseases, other non-infectious diseases for which interventions are necessary, or possible should

be considered for inclusion.

- The district is envisaged as the basic unit within which the reports received, data cleaned, analyzed and monitored continuously. A District Epidemiological Cell, with computer facilities and adequate personnel are established for this purpose.
- The District Epidemiology Cell reports weekly summary data on diseases and interventions to the State Epidemiology Center, which collect all district data and pass on monthly summaries to the National Institute of Communicable Diseases (NICD).
- The NICD has been expanded and strengthened to act as the National Apical Laboratory in support of the state level laboratories. Regional laboratories have been established as an intermediate level between the District cells and State and Center. For that training of the staff of epidemiology cells are undertaken.

The District Epidemiology Cell

- This cell is headed by one senior officer not below the rank of District Health Officer designating as the District Epidemiology Officer. One Medical Officer and 5 field workers per 2 million or less population will assist the District Epidemiology Officer. This cell completes the list of all health care institutions within the district. It will also prepare the list of private medical practitioners of the modern system operating within the district. All reports should be entered in the computer and any duplication removed. The report should be scanned everyday to detect any unusual clustering of cases either in time or space. Data should be analyzed on a weekly basis and weekly summary statistics will be forwarded to the State Epidemiology Unit. Every outbreak of disease should be investigated without any delay by the district unit.
- The district cell will be responsible for defining and designing interventions. The entire health system in the district may be mobilized for interventions and whenever necessary arise the National Institute of Communicable Diseases may be involved for specialized help.

The programme is currently in operation in 45 districts of 18 states. NICD is the nodal agency for formulation of strategies and operational guidelines supervision, monitoring and coordinating the programme implementation.

Achievements

- 1. The programme is on operation in 80 districts of 28 states and UTs.
2. Multidiscipline Rapid Response Team (RRTs) at state and district levels under the programme has been constituted. The teams have been provided training in surveillance, prevention and control of outbreaks.
3. RRTs for states have been trained at NICD, Delhi.
4. A joint team comprising of WHO and NICD undertook assessment of NSPCD in seven states, namely Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, and Uttar Pradesh.
5. All the states and district level epidemiological cells have procured computers, fax machines, and telephones for data processing and rapid communication of information.

Comments

- 1. Non-communicable diseases that are coming under law or national programme should also have comprehensive and effective programme of surveillance. Disease related to tobacco, dust exposure particularly in coalmines, PEM including iodine, selenium, vitamin-A, occupational and non-occupational injuries, mental disorders, etc. need surveillance system.

2. The District level laboratories are not developed much. The District Hospital must have adequate microbiology laboratory facilities, which will be available both for diagnostic purposes and for epidemiological investigations within the district. There is a need for a state level laboratory, for the purposes of supporting the laboratory service network in the district, for establishing external quality assurance, for ensuring the availability of quality reagents and also for helping in investigating the etiology of disease of public health importance, endemic or epidemic. The State Epidemiology Center should, therefore have adequate laboratory facilities.

3. District epidemiology cell must have an experienced epidemiologist.