

CONTROL OF COMMUNICABLE DISEASES THROUGH PRIMARY HEALTH CARE SYSTEM

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Abstract

In the fifties, the communicable diseases accounted for nearly 50% of total mortality and 75% of total morbidity in Indian population. With the advent of antibiotics, other chemotherapeutic drugs and with control of major communicable diseases, the morbidity due to these diseases has been reduced. Smallpox and guinea worm have been eradicated and yaws have been eliminated. But communicable diseases are still a major public health problem. Resurgence of some diseases from the point of eradication and appearance of new diseases has complicated the problem.

Proper planning is needed for control of communicable diseases through Primary Health Care (PHC). Grouping of diseases according to their mode of transmission will help in deciding how best the control measures could be delivered. Starting from home to primary health centres, careful planning is needed. Control of new communicable diseases does not come under the preview of PHC except awareness about these. Ground realities of PHC activities are a constrain.

Lack of training of the workers, shortfall in the numbers of male workers and inadequate laboratory facilities pose a major problem. Information, education and communication (IEC) activities do not reach the community to the desired level.

Introduction

In 1978, a Joint Conference sponsored by WHO and UNICEF adopted a resolution known as 'Alma – Ata' declaration with a goal for "Health for all by 2000". This was to be achieved by strengthening the primary health care (PHC) system. It was not a concept, but a serious attempt, so that each individual gets access to essential health care.

India has made considerable progress in improving the PHC system. While considering delivery of control of communicable diseases through this system, one has to take into consideration present load of communicable diseases, strength and weakness of PHC system. Late Dr. C. G. Pandit in 1966¹ stated that old diseases like T.B., leprosy were

existing and new diseases like dengue and Japanese encephalitis were emerging. His statement of 1966 is true to a great extent even in 2007:

- small pox, guinea worm have been eradicated,
- there has been resurgence of the diseases that were eradicated or on the point of eradication and
- there are emerging diseases like Avian-flu.

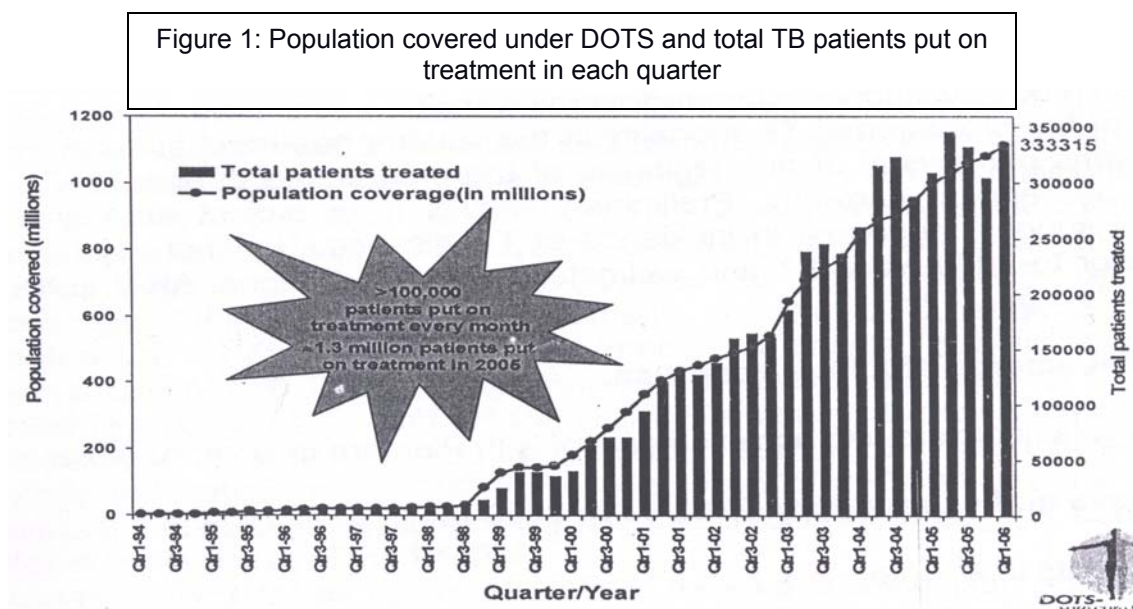
India is undergoing an epidemiological transition. In India, non - communicable diseases like diabetes and heart diseases are increasing. The communicable diseases which accounted for about 75% of morbidity and about 50% of mortality in post-independent period, now account for 50% of total morbidity; but currently, about 50% of deaths are due to non - communicable diseases. This paper essentially deals about the control of communicable diseases through PHC System.

Communicable diseases

The scenario of communicable diseases is getting complicated due to various social and ecological factors like rapid industrialisation, urbanization and migration of people. For the control of communicable diseases through PHC system, firstly the existing load of communicable diseases needs careful consideration.

Tuberculoses

Tuberculosis is a major health problem and accounts for 4.17 lakh of deaths annually. The population covered under the DOTS is given in Figure 1².



Emerging problems in T.B. include HIV/T.B. coexistence and emergence of drug resistant Tuberculosis. Some claim drug resistance to be as high as 50 %. While drug resistance may not be that high, drug compliance continues to be poor which has a direct relation with the primary health care system.

Leprosy

Over the years there has been substantial progress in the control of leprosy. The goal of elimination, i.e. less than one case per 10,000 population has been achieved. In mid 2006, the prevalence rate was 0.85 per 10,000 population. However, eradication is yet to be achieved.

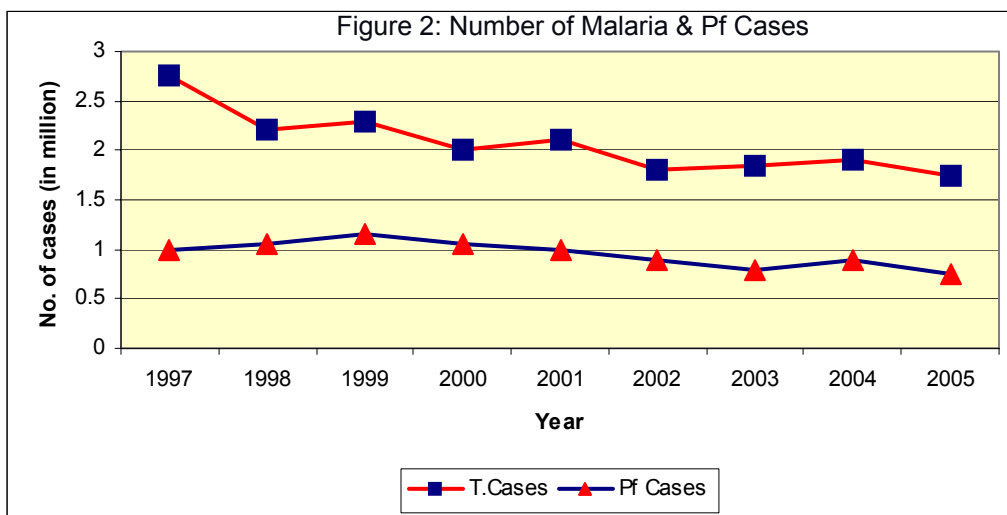
Vector Borne Diseases

Factors associated with the vector borne diseases include:

- environmental changes due to industrialisation,
- irrigation projects and construction activities,
- migration of populations,
- parasite resistance to drugs and
- vector resistance to insecticides.

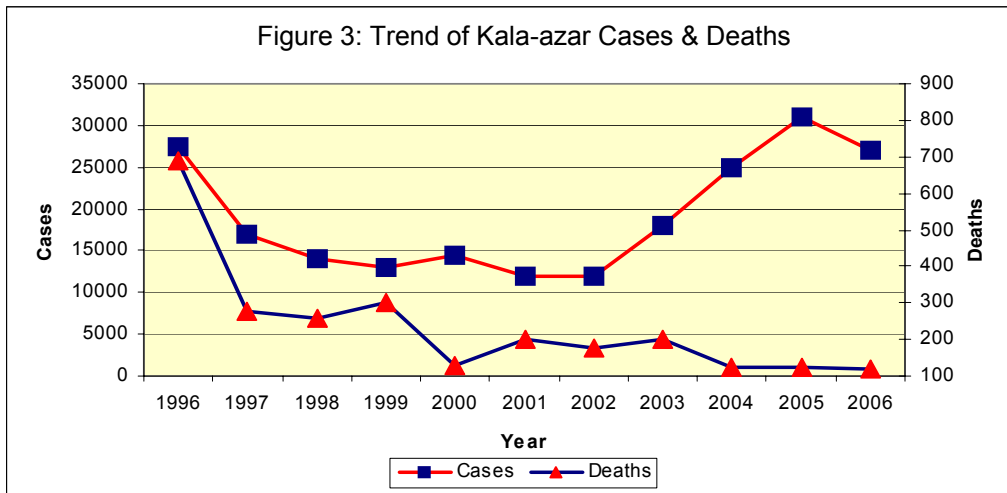
Malaria

Malaria was one of the most important vector borne diseases. In 1963 only 1 lakh cases were reported as compared to 75 million cases in 1949. There was a massive resurgence reaching a peak of 6.4 million cases in 1976. Since 1978, the reported cases were 1-2 million per year (Figure 2)². Emergence of drug resistant strains of *P. falciparum* and vector resistance to many insecticides are major problems.



Kala-azar

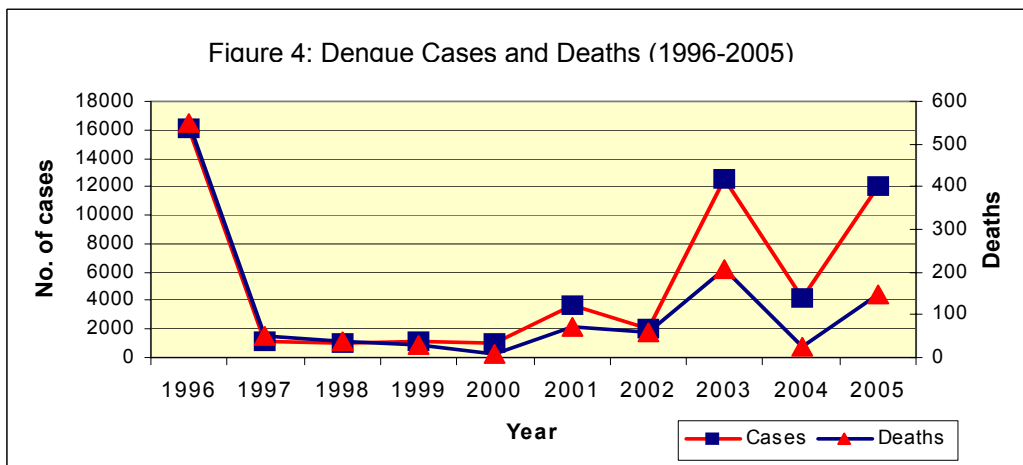
As a collateral benefit of Malaria Eradication Programme, the kala-azar prevalence was almost zero by 1964-65. In 1978, a major out break occurred in Bihar Since then kala-azar is a problem in Bihar, W. Bengal, UP, Jharkhand, Chattisgarh and occasional cases are reported from Assam and Himachal Pradesh. The trend of kala-azar cases and deaths are given in Figure 3². Drug resistance to commonly used drugs has necessitated change over to more expensive drugs with potentially toxic side effects. Vector resistance to DDT has been reported.



Filariasis

It is a major problem in many parts except some northwestern states in India. Currently, the control programme envisages mass administration of diethyl-carbamazine alone or in combination with albendazole. Inability to ensure universal drug distribution and inadequate compliance are major problems in the programme.

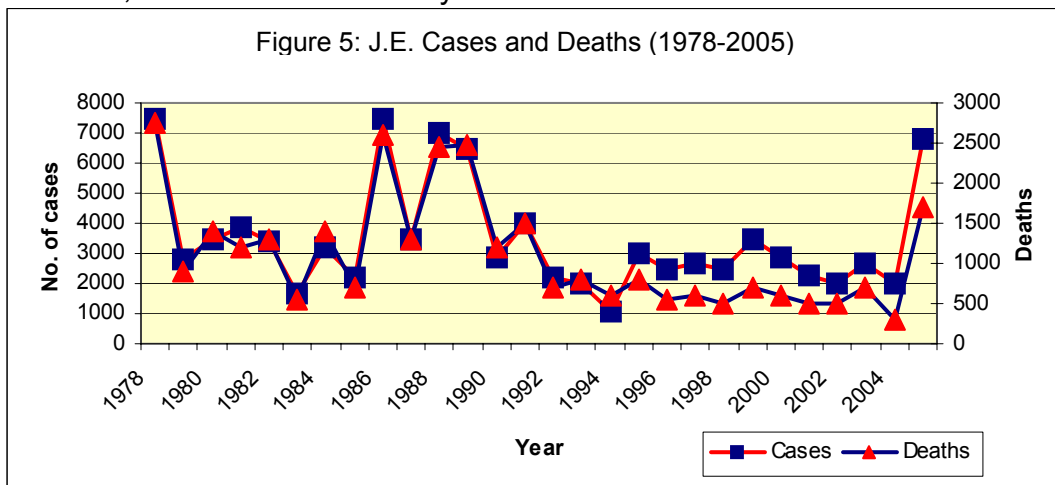
Dengue



Dengue was first reported in 1964 in West Bengal along with chikungunya. Now, it is being reported in many parts of the country. Dengue cases and deaths due to dengue from 1996 to 2006 are given in the Figure 4². Lately *chikungunya* out break have been reported from southern and western states. In the absence of curative drugs and preventive vaccines, vector control and management of cases to prevent death are primary control measures.

Japanese encephalitis (J.E.)

Since 1978 it was a serious problem in many parts of the country. Cases and deaths are reported every year from UP, Bihar, Southern States. Cases and deaths due to J.E. are given in Figure 5. Preventive vaccine is available, and has been recently used in UP.



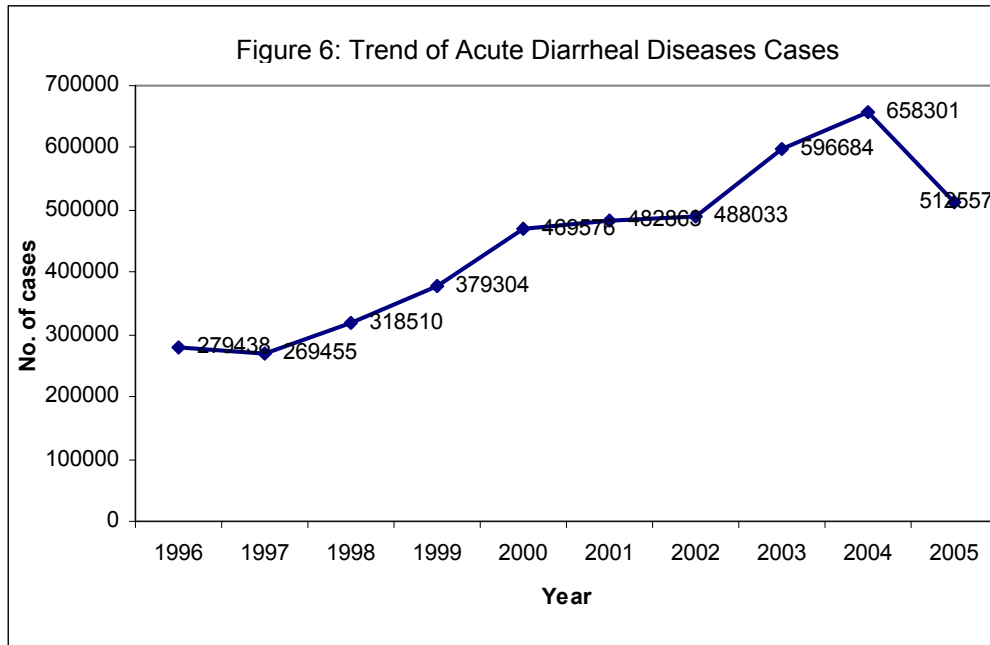
HIV / AIDS

This is a major health problem in India, about 5.2 million people are living with HIV / AIDS. This is not only a medical problem, but also a social problem.

Apart from these, there are many communicable diseases that have to be considered while discussing the delivery of control measures through PHC system.

Water Borne Disease

It is a major problem all over the country. Large number of cases of enteric fever, viral hepatitis, cholera and acute diarrhea are reported every year. Trend of acute diarrheal cases is given in Figure 6².

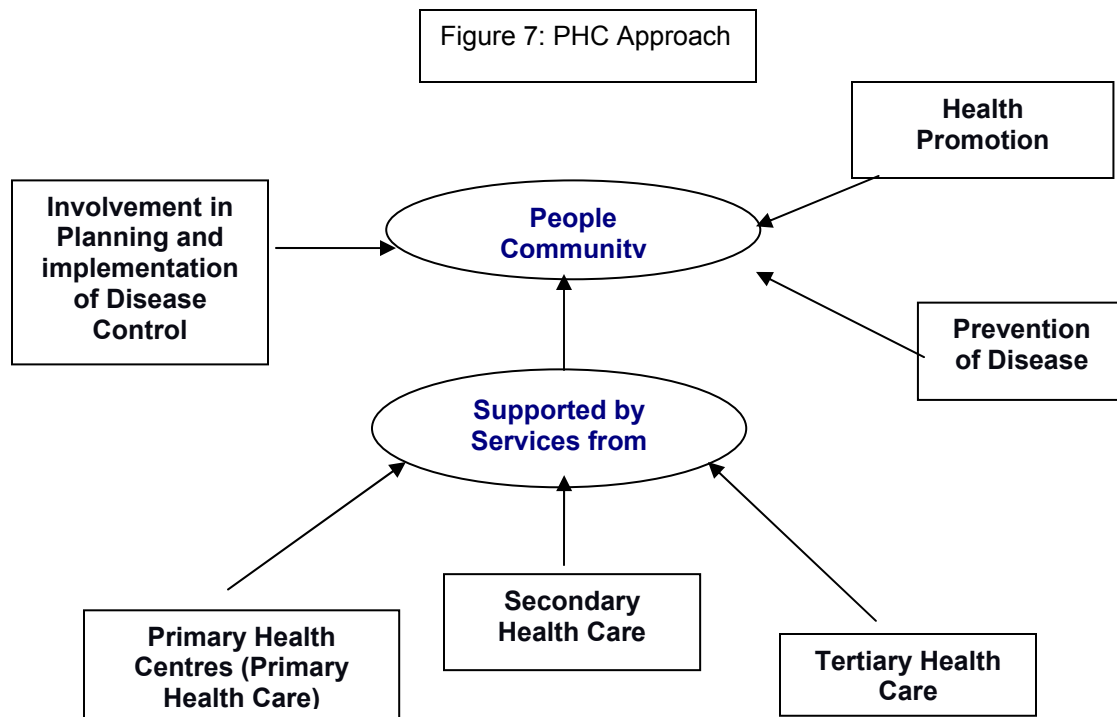


Communicable disease control through PHC

The basic principal of PHC is universal access to care, coverage, health equity; strategy oriented to social justice and community involvement in planning and implementation of all health activities.

There are two components for the successful delivery of diseases control measures i.e. performances of organizational structure and peoples involvement^{3,4}. This is shown in the diagram below in Figure 7.

The population growth roughly 2.3 % per annum puts a tremendous strain on primary health care system. Further, PHC system suffers from frequent changes in the personnel, vacant posts, poorly developed laboratory services, deficiency in motivation of staff, interruption in drug supply and adequate health promotion activities. When People are seldom taken into consideration in planning stage; but their involvement is solicited during implementation stage through health information, education and communication (IEC). There are isolated examples of success stories of the impact of IEC on health delivery. People by and large are interested in economic gain. Economic gain through control of diseases is not easily perceived by the people because of low educational level⁵. Therefore, more investment is needed to strengthen the organization by increasing social workers and non-governmental organization to ensure community involvement.



If

people are enlightened, they could be of great help in control of the diseases. Some of the areas where they could participate are listed below.

Individual

- self care including preventive measures,
- home remedies,
- early recognition of diseases,
- health seeking behaviour.

Community

- volunteer like those meaning Drug distribution centers and fever treatment depots (Malaria programme),
- malaria link worker,
- reporting of unusual cases to appropriate authorities for example, the panchayat president complained the PHC doctor about flea nuisance in the village a week earlier to the out break of human plague in Beed district of Maharashtra where large scale ecological changes occurred following earth quake in 1994,
- motivating community in diseases control.

Village level health providers

In the village there may be practioners of different systems of medicine. They can be of immense help, if the system recognises, and encourages them in the delivery of health care.

References

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3. WHO Report of Global meeting on future strategic direction for primary health care, 27-28 October 2003.
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Control of Communicable Diseases through Primary Health Care

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Problem of Communicable Diseases : Present Scenario

◆ Ancient Diseases

- T.B.
- Leprosy

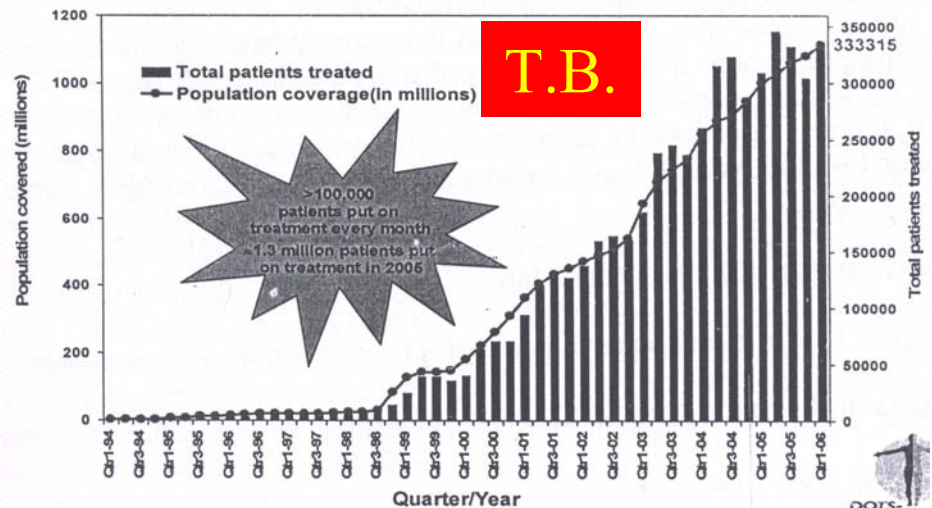


Fig. Population covered under DOTS and total TB patients put on treatment in each quarter

LEPROSY

Goal of Elimination:-

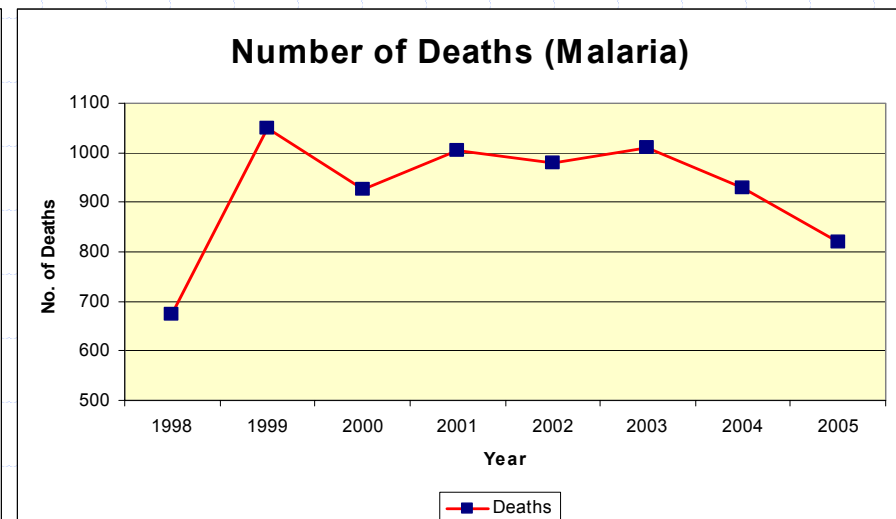
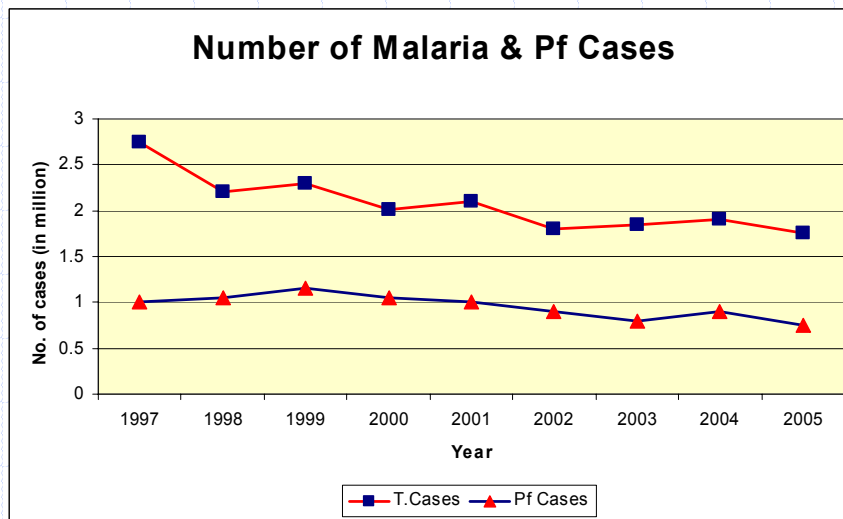
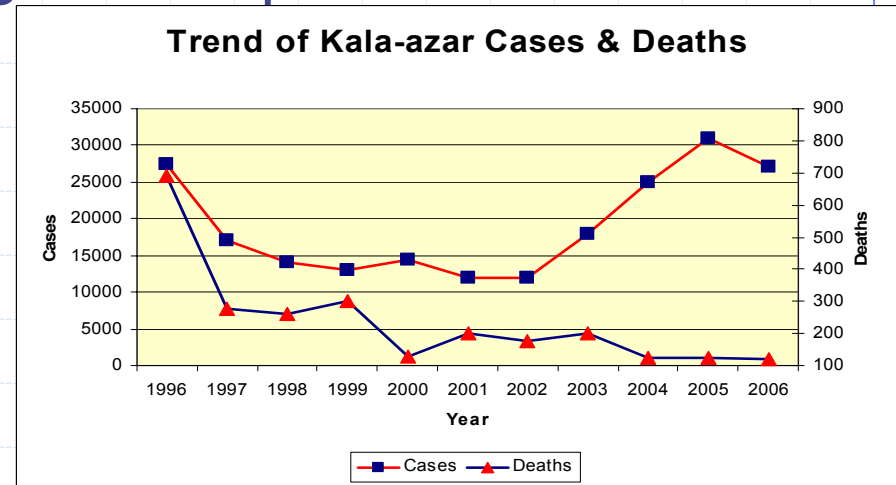
- < 1 case in 10,000 population
- December 2005, the prevalence rate was 0.95/10,000 population
- Mid-May 2006, the prevalence rate was 0.85/10,000

Problem of Communicable Diseases : Present Scenario

◆ Diseases which have resurged from point of eradication

- Malaria
- Kala-azar
- Human Plague

After 40 years of disappearance outbreak in Maharashtra, H.P.

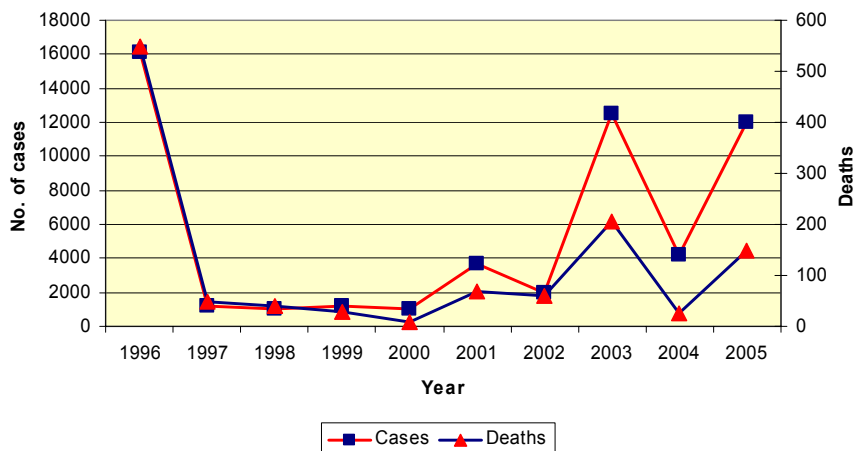


Problem of Communicable Diseases : Present Scenario

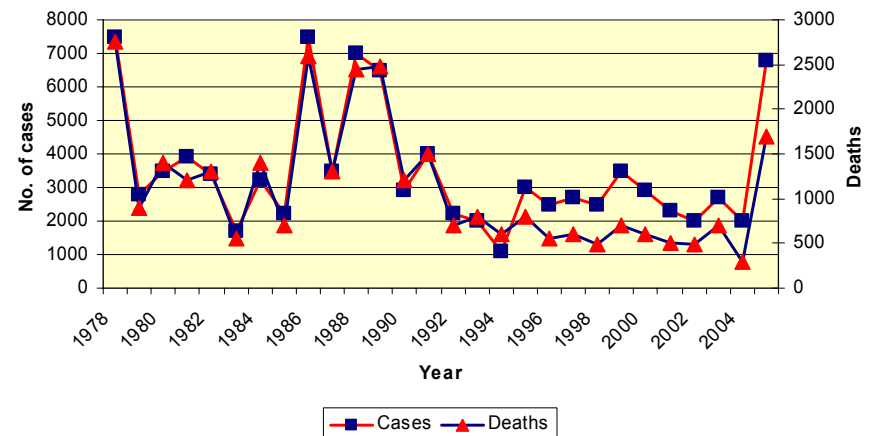
◆ Other Vector borne Diseases

- Dengue – 1963
- Japanese Encephalitis
- Filariasis

Dengue Cases and Deaths (1996-2005)



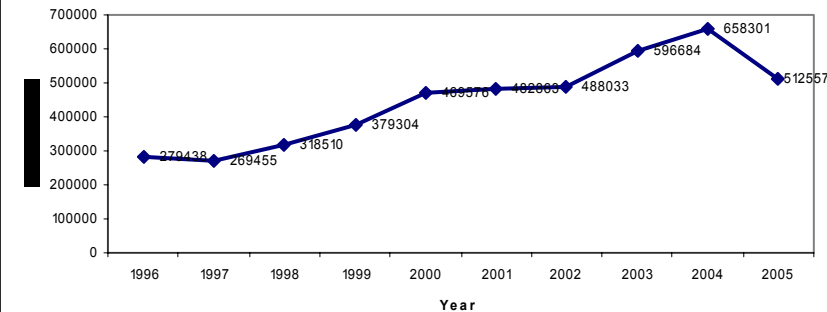
JE Cases and Deaths (1978-2005)



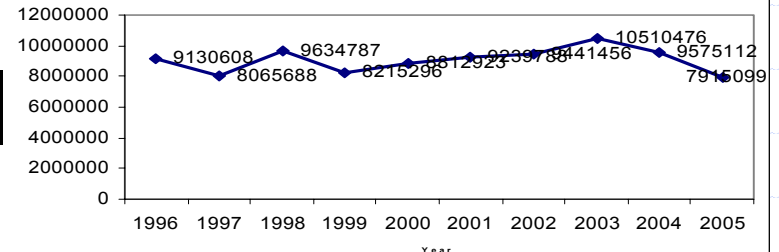
Problem of Communicable Diseases : Present Scenario

- ◆ Water Borne Diseases
- ◆ Respiratory Tract Infections
 - ARI

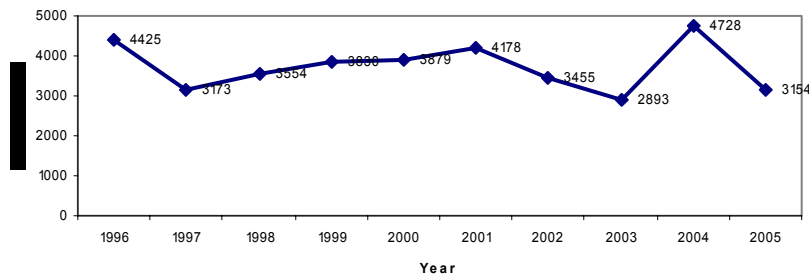
Trend of Enteric Fever Cases



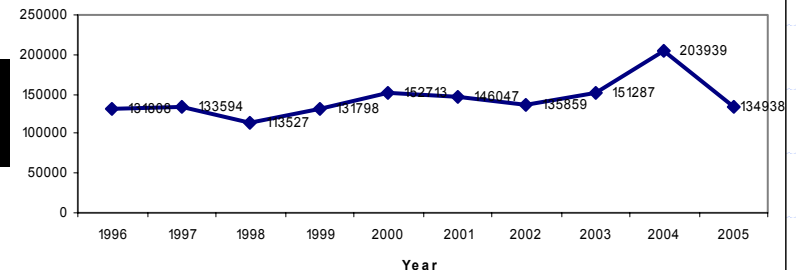
Trend of Acute Diarrhoeal Disease Cases



Trend of Cholera Cases



Viral Hepatitis in India



Problem of Communicable Diseases : Present Scenario

◆ Directly transmitted Diseases

- HIV/AIDS
- STDs
- Rabies

HIV/AIDS

- **5.206 million people living with HIV/AIDS.**
- **Spread from urban to rural & from high risk group to General population.**

RABIES

It is estimated that about 20,000 people die of rabies in India every year. This figure may not be exact as there is no organised system of surveillance of rabies cases and hence lack of reliable data. There is no reliable data on animal bites in the country, however, estimates suggest that 17.5 million animal bites occur annually. Dogs inflict more than 95% of bites

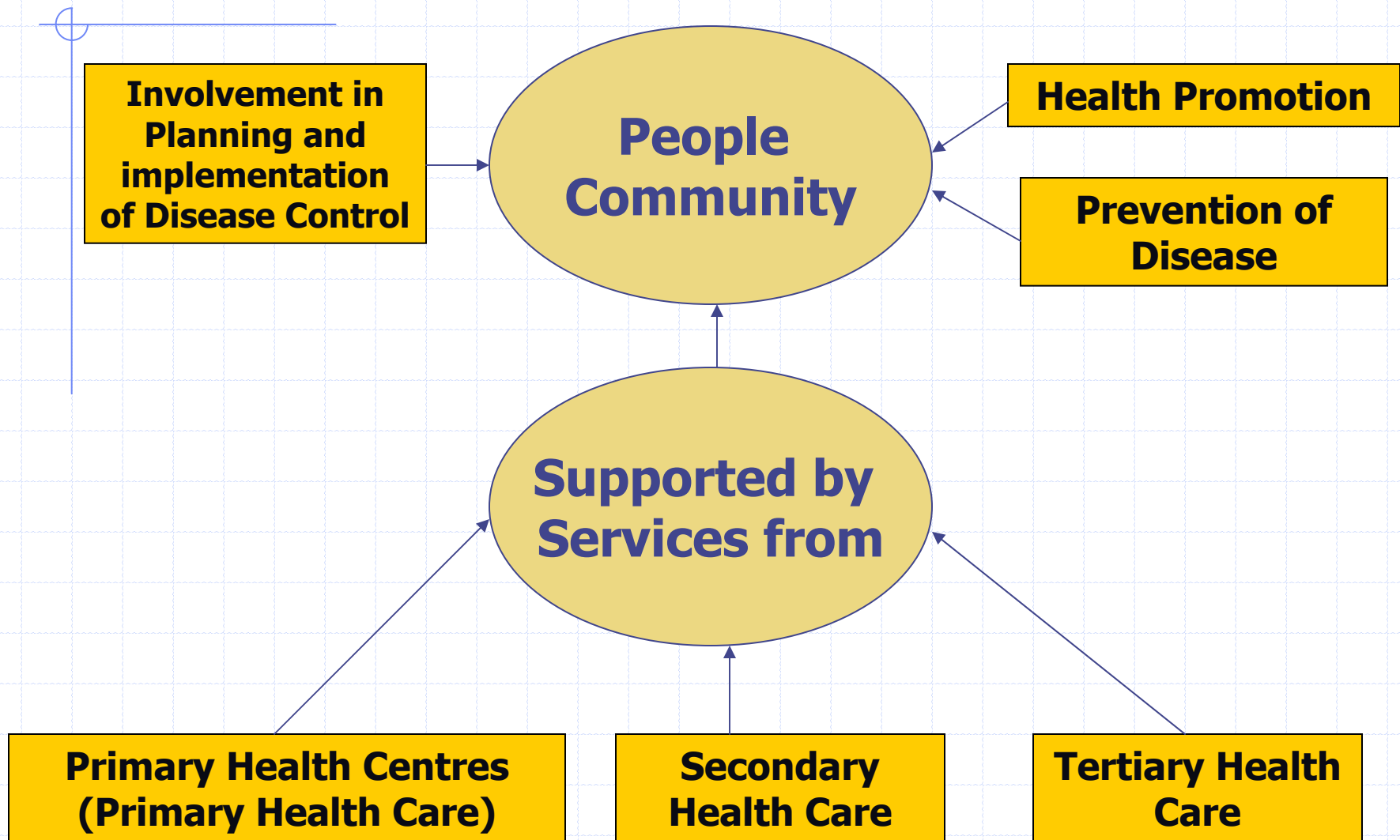
Basic Principles of Primary Health Care

- ◆ Universal access to care and coverage
- ◆ Commitment to health equity strategy
- ◆ Strategy oriented to social justice
- ◆ Community involvement in planning and implementation

Basic Principles of Primary Health Care

- ◆ Self care – home
- ◆ Managing active and chronic cases
- ◆ Continuity of care
- ◆ Health promotion and prevention of Diseases

PHC Approach



Existing PHC Setup (Community)

1. Home/Community

- Self care
- Personal Protection

2. Village

- DDC – 6 lakhs
- Malaria link workers (1 per village in hard core areas)

3. Practitioners of any discipline

People - Community

◆ VBD

- Personal protection
- Elimination of intra and peri-domestic breeding
- Timely recognition of seriousness of the disease
- Utilisation Health Volunteer's (DDC & Link workers) services for getting appropriate drugs

◆ WBD

- Self protection
- Use of ORS & encourage breast feeding to babies
- Seek services for immunisation against Typhoid
- Recognise the need for hospitalisation.

People - Community

◆ ARI

- Home remedies for upper ARI
- Recognition of seriousness to shift the child to appropriate health care facilities

◆ Directly Transmitted Diseases

- Self protection
- Washing of wound due to animal bite and immunisation against Rabies

◆ New Diseases (Sars, Avian flue, Nepha virus, Chandipura virus)

- Awareness

All these possible with IEC and Empowering the Community

Primary Health Care Service

1. Sub Centres – 1,40,000

- ANM
- AWW
- ASHA

2. Primary Health Centres – 23,109

- Physician
- Laboratory
- Health Assistant

3. Community Health Centres – 3,222

- Physicians
- Laboratory
- Health Assistants
- Computer Facilities

Ground Realities of Service Providers (PHC Level)

- ◆ Mostly community sectors are not involved
- ◆ Gross deficiency of male health workers
- ◆ Frequent changes, vacant posts of medical personnel
- ◆ Poorly developed laboratory services
- ◆ Deficiency in the motivation of staff
- ◆ Interruption of drug supply
- ◆ Health promotion activities inadequate

Encouraging Features

- ◆ NGOs involvement in involving community in planning implementation
- ◆ People demand for services
- ◆ Alert media in highlighting deficiencies of service providers and imparting knowledge on self protection and control of communicable diseases.



Thanks