



# COUNTER MEASURES TO COMBAT INFECTIOUS DISEASES IN DELHI

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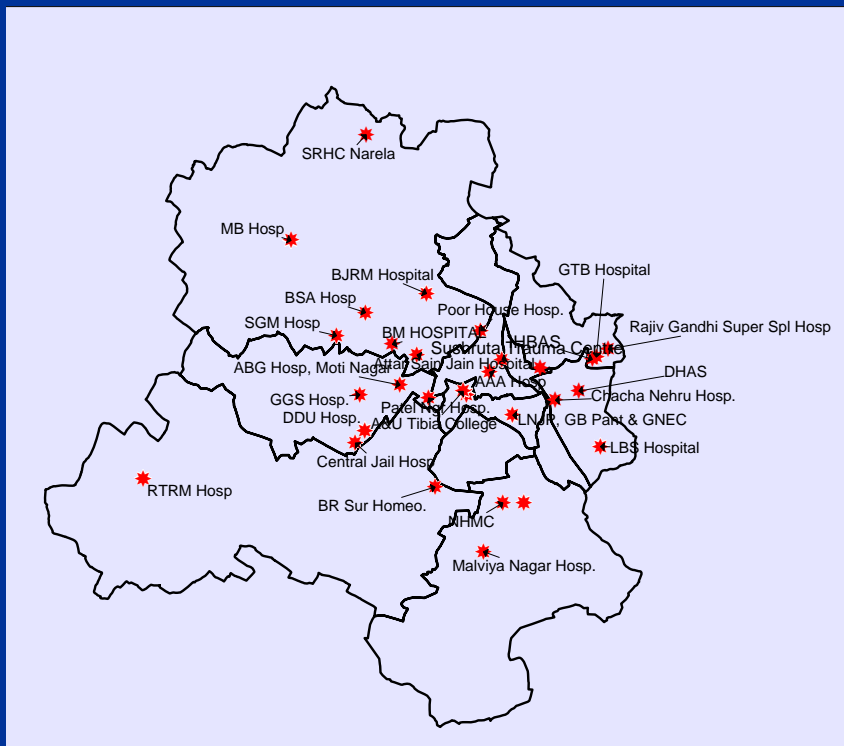
# DELHI – CAPITAL OF INDIA

## A Profile

\* Area : 1483 Sq Km \* Population : 16.6 M

(Estimated, As on 1<sup>st</sup> Mar 05)

- HUB FOR EMPLOYMENT/TRADING – hence immigration, slums, unplanned development



### 9 Administrative Districts

- North District
- West District
- North West District
- South West District
- South District
- East District
- North East District
- Central District
- New Delhi District

# Institutional Framework :

## MULTIPLE Agencies involved with Health Care Delivery

### ■ State Government – Delhi

- **Directorate of Health Services-** Allopathy
- **Directorate of Indian System of Medicine & Homeopathy –** Ayurveda, Unani & Homeopathy
- **Directorate of Prevention of Food Adulteration**
- **Drug Control Department**
- **Delhi AIDS Control Society**

### ■ Local Self Governance

- \* MCD
- \* NDMC
- \* Delhi Cantonment Board

### ■ Central Government and its agencies

- \* Central Government/CGHS
- \* Railways
- \* Defence
- \* ESI

### ■ Private agencies/bodies/NGOs

# Roles of Agencies

## ■ CENTRAL GOVERNMENT

\* Policy    \* Finance    \*Monitoring

## ■ STATE GOVERNMENT

■ Monitoring , Regulation, Co-ordination & Finance

■ Primary, Secondary and Tertiary Health Care

■ Water Supply & Sewage Disposal

## ■ LOCAL SELF GOVERNANCE

\* Primary Health Care

\* Public Health

\* General Sanitation and Waste Disposal

■ Private organisations :            \* Curative Care

# INTEGRATED DISEASE SURVEILLANCE PROJECT

- Capacity building at the state and district
- For early identification of outbreaks of communicable diseases, and
- Appropriate and timely response to the outbreaks of communicable diseases.
  - National Programme – Funded by Central Government
  - Surveillance at District, State and National Level
  - Information System : Computerized through Various Agencies
- Infrastructure for Prompt response
  - Formation of Rapid Response Team and epidemiological support : **THE DISTRICT EPIDEMIOLOGY CELL** – in Delhi under Zonal Health Officers (ZHO/DHO)

# SURVEILLANCE

- Weekly monitoring meeting under Minister of health with top health functionaries of organisation to monitor situation
- State level : public Health Wing/Control Rooms : DHS & MCD
- Individual Disease Control Programs /Monitoring Cells :
  - Food/Water Borne :AGE/Cholera
  - Tuberculosis
  - Vector Borne :Malaria, Dengue, etc.
  - HIV/AIDS including STI
  - leprosy
  - Childhood Infections : ARI, Measles, Diphtheria

# Diseases for Surveillance

1. Acute Flaccid Paralysis\*
2. AIDS\*
3. Chicken pox
4. Cholera like diarrhea
5. Diphtheria
6. Dysentery
7. Encephalitis
8. Fever syndromes 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. Tetanus
19. TB
20. Whooping cough

\* For these diseases the nation already has national programmes and some sort of surveillance is carried out under these programmes that is being strengthened.

# Statutory Framework

## ■ Delhi Municipal Corporation Act

### ■ NOTIFIABLE DISEASES : of Epidemic Potential

- Mandatory for notification by all agencies
- For immediate Response by Public Health System
- Diseases Include:

•AGE/Cholera

•Meningococcal disease

•Dengue

•Chickenpox

•Measles

•Typhoid

•Hepatitis

•Malaria

•Tuberculosis

More diseases can be brought under the Notifiable category by executive order



# Municipal Corporation of Delhi

- Health Department
  - Primary Care
  - M&CW Centres and Maternity Hospitals
  - Field Workers
  - Mainly geared for waterborne and vector borne diseases
  - Public Health Laboratory
- Sanitation :
  - Sweeping and waste disposal

# Government of Delhi

- Major Health Agency – monitoring of all agencies
- Network of dispensaries and hospitals with lab support
- Involved in primary, secondary and tertiary level care
- Has all infrastructure – institutional, technical and Human
- Planning, Monitoring and implementation of all health activities within State

# Government of Delhi :

## Directorate of Health Services

- 8 Districts- under 8 Chief District Medical Officers
- STRENGTHENING OF DISTRICT LEVEL HEALTH FUNCTIONARIES FOR PUBLIC HEALTH ACTIVITIES UNDER NATIONAL HEALTH MISSION
- 180 Dispensaries all over Delhi
- 14 hospitals
- Mobile Health Scheme : Slums/underprivileged areas
- Around 1000 doctors
- Total Staff : over 7000

# Delhi : Infectious Diseases

## Major problems

- **WATER/FOOD BORNE DISEASES** : ADD, Typhoid, Hepatitis
  - WATER QUALITY, FOOD HYGEINE SURVEILLANCE
  - DISTRIBUTION OF CHLORINE TABLETS/ORS
  - HEALTH EDUCATION
- **VECTOR BORNE DISEASES** : Malaria, Dengue
  - VECTOR SURVEILLANCE
  - DISEASE SURVEILLANCE
  - HOUSE TO HOUSE SURVEYS FOR DOMESTIC BREEDING, SOURCE REDUCTION
  - INSECTICIDE SPRAYS/FOGGING
  - EARLY DIAGNOSIS AND PROMPT TREATMENT
- **AIRBORNE DISEASES** : ARI, TUBERCULOSIS, MENINGOCOCCAL
  - CONTROL PROGRAMMES
  - HEALTH EDUCATION
  - DIAGNOSIS & TREATMENT FACILITIES
  - COMMUNITY LEVEL INTERVENTION
- OTHERS:
  - **HIV/AIDS : UPCOMING PROBLEM**
  - Leprosy : 4958 CASES ON RECORD, 5300 RFT IN 2004-05, Near elimination (by 2006)

# Major Health Problems in Delhi – Infectious diseases

- **Cholera** : endemic , seasonal outbreaks 1986, 1995,1998, 2004
- **Dengue** : 1967,1970,1982,1991,1994 ,1996, 2003
  - 1996 - 423 casualties and more than 10,000 cases
  - During 1997 and 1998, there were 436 and 313 and 1 death each year
- **Meningococcal** : low endemic , outbreak in 2005
  - 2004 –248 cases, 11 deaths
  - 2003 – 425 casesm 48 deaths
  - 2002 – 397 cases, 50 deaths
- **Malaria**
  - 1978 – 389000 cases
  - 1991 – 8000 cases
  - 1998 -2382 cases

# PREVENTION AND CONTROL OF DENGUE

- Disease surveillance:
    - on daily basis
    - the information is scrutinized for identification for early warning signals (clustering of cases/ unusual increase in number of cases)
    - for mosquito control measures in and around the focus of infection.
  - Mosquito Control Measures:-
    - The insecticides sprays /fogging
    - other biological control measures
    - The vector surveillance
    - Source Reduction at household level
  - Information Education Campaign
    - For community participation
  - Medical Care
  - Training
- \* Intersectoral Coordination

# Cholera

■ Year	Cases	Deaths
■ 1990	538	0
■ 1991	536	0
■ 1992	1070	0
■ <b>1994</b>	<b>2226</b>	<b>2</b>
■ 1996	906	0
■ <b>1998</b>	<b>1903</b>	<b>8</b>
■ 2000	958	0
■ <b>2001</b>	<b>1267</b>	<b>0</b>
■ 2002	637	0
■ <b>2003</b>	<b>1527</b>	<b>1</b>
■ <b>2004</b>	<b>1784</b>	<b>0</b>
■ 2005	605	0 .. Till july

# AGE/Cholera

- **CHOLERA - A NOTIFIABLE DISEASE**
- **SEASONAL : ASSOCIATED WITH WATER SCARCITY**
- **CAUSE SHORTAGE OF WATER, USE OF UNSAFE WATER**
- **MIXING OF WATER WITH SEWAGE**
- **STEPS:**
  - **EARLY DETECTION AND PREVENTION OF DEATH: ROLE OF ORS**
  - **IMPROVEMENT OF WATER SUPPLY**
  - **CHLORINE TABLE T DISTRIBUTION -HOME DISINFECTION OF WATER**
  - **IEC FOR COMMUNITY PARTICIPATION**
  - **REGULAR MONITORING- REGULAR/DAILY DAILY DURING OUTBREAK SEASON TO TAKE IMMEDIATE MEASURES: INVOLVE HEALTH WATER SUPPLY AND SANIATION DEPARTMENT**
  - **FOOD SAFETY STANDARDS - STRICTLY ENFORCEMENT**
  - **WATER QUALITY SURVEILLANCE**
  - **INVESTIGATION OF FOCAL OUTBREAKS AND CONTAINMENT MEASURES**



# National TB Control Programme

- Early diagnosis prompt management
- Prevention /treatment of MDR Strains
  - Health education and community outreach.
  - Provision of directly observed treatment.
  - In-hospital care for tuberculosis disease.
  - Microscopy and treatment center.
  - TB Unit Model

THANK

YOU