NATIONAL VECTOR BORNE DISEASE CONTROL PROGRAMME (NVBDCP)

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Introduction

- Launched in year 2003-04
- Major vector borne diseases-
  - Malaria
  - Filaria
  - Kala-azar
  - Japanese Encephalitis
  - Dengue / Dengue Hemorrhagic fevers
  - Chikungunya
Three pronged strategy

Integrated vector management

- Indoor residual spray
- ITN
- Larvivorous fish
- Source reduction

Disease management

- Early case detection
- Complete treatment
- Referral services
- Epidemic preparedness
- Rapid response

Supportive interventions

- BCC
- PPP
- ISC
- HRD
- OR
- M&E
- GIS

Prevention & control of VBDs
Mission statement

• Integrated accelerated action towards
  – Reducing mortality on account of Malaria, Dengue and JE by half
  – Elimination of Kala-azar by 2010
  – Elimination of lymphatic filariasis by year 2015.
MALARIA

• Malaria is a potentially life threatening parasitic disease caused by parasites known as
  ➢ *Plasmodium viviax* (*P.vivax*),
  ➢ *Plasmodium falciparum* (*P.falciparum*),
  ➢ *Plasmodium malariae* (*P.malariae*) and
  ➢ *Plasmodium ovale* (*P.ovale*)

• It is transmitted by the infective bite of *Anopheles* mosquito

• Man develops disease after 10 to 14 days of being bitten by an infective mosquito
India’s contribution to Malaria in SEAR

India contributes to 71% of total malaria cases in the SEAR
Trends of Malaria cases & deaths (2001-2012)
Milestones of Malaria control activities in India

Prior to 1953
- Estimated Malaria cases in India: 75 million

1953
- National Malaria Control Programme (NACP)

1958
- NMCP → NMEP (National Malaria Eradication Programme)

1965
- Cases reduced to 0.1 million

1970-76
- Resurgence of malaria
- 6.46 million malaria cases
1977 - Modified Plan of Operation implemented

1997 - World Bank assisted Enhanced Malaria Control Project (EMCP)

1999 - Renaming to National Anti Malaria Programme (NAMP)

2002 - Renaming to National Vector Borne Disease Control Programme (NVBDCP)
2005
• Global fund assisted Intensified Malaria Control Project (IMCP)
• Introduction of RDT in the programme

2006
• ACT introduced

2008
• ACT extended
• World Bank supported National Malaria Control Project

2009
• Introduction of LLINs

2010
• New drug policy
## Classification of Endemic Areas

<table>
<thead>
<tr>
<th>Annual Parasite Incidence (API) More than 2</th>
<th>Annual Parasite Incidence (API) Less than 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Spraying of all areas</td>
<td>• Spraying: focal spraying</td>
</tr>
<tr>
<td>• Entomological assessment</td>
<td>• Surveillance: more vigorously</td>
</tr>
<tr>
<td>• Surveillance:</td>
<td>• Treatment</td>
</tr>
<tr>
<td>➢ Active surveillance</td>
<td>• Follow-up</td>
</tr>
<tr>
<td>➢ Passive surveillance</td>
<td>• Epidemiological investigation</td>
</tr>
<tr>
<td>• Treatment of cases</td>
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Strategies: Malaria

Early case detection and prompt treatment (EDPT)

• Clinically suspected malaria cases are confirmed on microscopy or rapid diagnostic kits (RDK)

• Drug Distribution Center (DDC) and Fever Treatment Depots (FTD) have been established in rural areas

• In inaccessible areas, Health agencies and volunteers running FTD’s are provided with RDK’s
Algorithm for diagnosis & treatment of Malaria

Where microscopy result is available within 24 hours

Clinically suspected malaria case

Take slide for microscopy

- **P. vivax**
  - CQ 3 days +
  - PQ 14 days

- **P. falciparum**
  - ACT 3 days + PQ single dose

- Negative
  - Needs further evaluation*
Where microscopy result is not available within 24 hours

Clinical suspected malaria case
Perform RDT

RDT for *Pf*, Also prepare blood smear

- *Pf* RDT positive
  - ACT 3 days + PQ single dose on Day 2
- *Pf* RDT Negative
  - Send blood slide to laboratory
  - Give CQ for 3 days, and await microscopy result

Microscopy result
- + ve for *Pv* - PQ for 14 days under supervision.
- + ve for *Pf* - ACT 3 days + PQ single dose on Day 2

- RDT for *Pf* & *Pv*
  - Positive: Treat according to species
  - Negative: Needs further evaluation

ACT: Artesunate, Sulfadoxine & Pyrimethamine
Trends of **DENGUE** cases & deaths (1996-2010)
GOI initiatives for Dengue

- Established 110 Sentinel surveillance hospitals with laboratory support for augmentation of diagnostic facility for Dengue in endemic State(s) in 2007 which has been increased to 170 in 2009.
- 13 Apex referral laboratories with advanced diagnostic facilities for back up support.
- To maintain the uniformity and standard of diagnostics in these laboratories IgM MAC ELISA test kits are provided through National Institute of Virology (NIV), Pune. Cost is borne by GOI.
• Diagnosis of Dengue and Chikungunya is provided to the community at free of cost.
• Kits are supplied by NIV, Pune on receipt of requirement from the respective states.
• Buffer stocks are also maintained to meet any exigency.
• Ensuring the diagnostic facility and availability of kits is the responsibility of the respective State Programme Officers, NVBDCP.
### Trend Of Average MF rate

<table>
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<tr>
<th>Year</th>
<th>2004</th>
<th>2008</th>
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<tbody>
<tr>
<td>National Average</td>
<td>1.24</td>
<td>0.63</td>
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</table>

- Endemic district 250 (in 20 States/UTs)
Strategies for Filaria Control

- Recurrent anti-larval measures at weekly intervals.
- Environmental methods including source reduction by filling ditches, pits, low lying areas, deweeding, desilting, etc.
- Biological control of mosquito breeding through larvivorous fish.
- Anti-parasitic measures through 'detection' and 'treatment' of microfilaria carriers and disease person with DEC by Filaria Clinics in towns covered under the programme.
Revised Strategy

• Annual Mass Drug Administration with single dose of DEC was taken up as a pilot project in 1996-97.

• This strategy was to be continued for 5 years or more to the population excluding children below two years, pregnant women and seriously ill persons in affected areas to interrupt transmission of disease.
Extent of problem of KALA-AZAR in India

- Endemic in eastern States of India namely Bihar, Jharkhand, Uttar Pradesh and West Bengal.
- 48 districts endemic; sporadic cases reported from a few other districts.
Trend showing Kala-azar cases & deaths in India since 2002

The graph shows the trend of Kala-azar cases and deaths in India from 2002 to 2008. The cases are depicted by bars, and the deaths are shown by a line graph. The data indicates a general increase in cases and a slight decrease in deaths over the years.
Strategies for Kala-azar elimination

Enhanced case detection and Complete treatment

• Every case of fever of more than 15 days duration in endemic areas, not responding to anti-viral t/t or antibiotics with spleenomegaly is screened.
• Rapid diagnostic kit RK39 has replaced Aldehyde Test for diagnosis of Kala-azar.
• Introduction of oral drug Miltefosine as the first line drug since 2008.
• Directly observed treatment in endemic areas
Distribution of **JAPANESE ENCEPHALITIS** in India
Prevention and Control of JE

- JE vaccination campaign was launched during 2006
  - 11 most sensitive districts in Assam, Karnataka and Uttar Pradesh were covered.
- Re-orientation training course on JE case management.
- The diagnostic facilities have been strengthened at 50 sentinel and 13 Apex Referral Laboratories.
- Guidelines were developed on JE case management and prevention and control.
- One Vector Borne Disease Surveillance Unit (VBDSU) and one JE sub-office was established at BRD Medical College, Gorakhpur, Uttar Pradesh.
INTEGRATED VECTOR MANAGEMENT

- Source reduction, filling, streamlining water bodies
- Biological Control-Gambusia Fishes & Biolarvicides (Bacillus sphaericus)
- Impregnated bed nets
- DDT spraying.
- IEC campaigns
Integration under NRHM

At Village Level

- Monthly meetings of Village Health & Sanitation Committee serve as a platform for health education and counseling of community.

Involvement of ASHA as-

- Surveillance worker to inform any increase in fever cases including Dengue/ Chikungunya and J.E.
- FTD for early detection of suspected malaria cases and treatment
- Linkage between ANC services and prevention & treatment of malaria
- Counselor for Filaria cases to practice home based management.
- Organizer, motivator and trainer in village level meetings/training workshops.
Thanks......