Access to Quality Medicines and other Technologies Task Force

Meeting of the Asia Pacific Leaders Malaria Alliance
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India: Profile

- 1210 million population (2011 census)
- 36 States/UTs with average 32 Million population (range: 0.06 to 191 million)
- Malaria (2012)
  - API: 1.06/1000
  - Reported cases: 1.06 million
  - Pv cases 534129; Pf cases 524370
  - Reported deaths: 519
Shrinking – Malaria Map - India

Stratification of Districts based on API

<table>
<thead>
<tr>
<th>API</th>
<th>2000</th>
<th>2012</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>&gt;10</td>
<td>59</td>
<td>10</td>
</tr>
<tr>
<td>&gt;5-10</td>
<td>22</td>
<td>3.7</td>
</tr>
<tr>
<td>&gt;2-5</td>
<td>65</td>
<td>11.14</td>
</tr>
<tr>
<td>1-2</td>
<td>72</td>
<td>12.2</td>
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<tr>
<td>&lt;1</td>
<td>370</td>
<td>63</td>
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</tbody>
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Malaria in India (2001-2012)

India reports about One million malaria cases annually

Source: NVBDCP
Decline in API and malaria deaths

Declining trend of malaria deaths in India
Antimalarial commodities

- Nation wide coverage
- Free of cost in public sector
Diagnosis of malaria

• **Microscopy**
  - At decentralised laboratories by trained technicians (~30000 labs in public sector)
  - 95 million slides examined in 2012
  - Results within 24 hours
  - Cost to government (including operational cost): about 0.6 USD/test

• **RDT**
  - Introduced in 2004
  - Monovalent (Pf only) RDTs till 2012
  - Bivalent RDTs (Pf and Pv) since 2013
  - Sensitivity >95% (Pf), >90% (Pv)
  - Specificity >98%
  - 14 million tests in 2012
  - Cost to government (including operational cost): about 0.8 USD/test
Treatment of malaria: National Drug Policy

• All fever cases should preferably be investigated for malaria by microscopy or RDT

• **P. falciparum**
  – ACT first line antimalarial
  – Artesunate+SP all over India except NE states
  – Decision to introduce artemether lumefantrine in NE states
  – ACT also in 2nd and 3rd trimester of pregnancy and quinine in 1st trimester
  – Primaquine single dose as gametocytocidal

• **P. vivax**
  – Chloroquine 3 days + Primaquine for 14 days
  – Injectable artesunate/quinine for severe malaria
  – Centralized and decentralized procurement

http://nvbdcp.gov.in/
QA of diagnostics/medicines

QA of microscopy
- Cross checking of all positive and 5% negative slides
- At state laboratories and Regional Offices for Health & FW

QA of RDTs
- Assess quality of RDTs procured and supplied by NVBDCP to various health facilities including ASHAs.
- Pre-dispatch QA and Post- dispatch QA to assess the quality of RDTs

QA of antimalarials
- CDSCO responsible for regulation of medicines
- QA/QC at the time of procurement
Monitoring antimalarial drug resistance

- Therapeutic efficacy studies at 15 sites each year
- 70 patients at each site enrolled
- Provide evidence to change drug policy
  - Policies based on the results
  - NIMR and NVBDCP
Integrated Vector Management

- Indoor Residual Spraying in selected high risk areas
  - DDT: 5000 metric tons/yr
  - Malathion: 10000 metric tons/yr
  - Synthetic pyrethroids: 1200 metric tons/yr

- Use of LLINs in areas with API>2
  - >12 million LLINs distributed by government

- Anti larval measures in urban areas
  - Larvicide e.g. temephos
  - Biological control e.g. Larvivorous fish, BTi

- Source reduction: Minor environmental engineering
NVBDCP: Review mechanisms

- National Vector Borne Disease Control Programme implemented all over India
- Regular monitoring by Government of India
- Independent monitoring and evaluation by Joint Monitoring Mission once in 3 years
- Review by World Bank, Global Fund, WHO and other stakeholders
- Guided by DGHS, Technical Advisory Committee and expert committees to take decisions on policies
- Regular interaction with WHO and other international organisations
Challenges to malaria control

- Challenges in Diagnosis
  - Sensitivity of RDTs
  - Turnaround time for microscopy reports
- Changing patterns of Malaria
- Challenges in Treatment
  - Artemisinin monotherapy (injectables used for uncomplicated malaria)
  - Drug resistance
  - Private sector treatment practices
- Challenges in Vector Control
  - Poor acceptance of indoor residual spray
- Lack of effective vaccine
- Access to healthcare delivery system
- Supply chain management
NVBDCP: Recent steps for malaria control

- Point of Care management: ASHAs
- Introduction of bivalent RDTs
- Evidence based policy changes
  - Drug Policy
  - Insecticide policy
- Banning oral artemisinin monotherapy (2009)
- Operational research
  - Monitoring antimalarial drug resistance
  - Monitoring insecticide resistance
  - Testing new products
    - Antimalarials
    - Diagnostics
    - Vector control tools
  - QA of medicines/diagnostics also undertaken by ICMR institutes
The way forward

- To bring down API to <1 by 2017 (as per 12th FYP) in all districts
- To halt and reverse the incidence of malaria by 2015 (MDG)
THANKS