RECENT DEVELOPMENTS AND ACHIEVEMENTS IN MALARIA CONTROL IN ZANZIBAR

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Malaria Interventions in Zanzibar

- Artemisinin-based combination therapy (ACTs)
- Use of Insecticide-treated bed nets (ITNs)
- Intermittent preventive treatment in pregnancy (IPTp)
- Indoor residual spraying (IRS)
- Behavioral Change Communication
- Surveillance, M&E including Epidemic preparedness and response
Historical malaria epidemiology in Zanzibar

- Malaria used to be a major public health and socioeconomic problem in Znz
- Malaria transmission all year round
  - High figures on prevalence over 60% (2000)
  - OPD Morbidity 50% (2002)
  - Hospital mortality (36% of admission cases 2002/02)
Current malaria epidemiology in Zanzibar

- Evidence through
  - Malaria prevalence 1927-2010
  - Long term trends Zanzibar hospitals
    - Laboratory
      - Malaria positivity rates
      - Blood transfusions
    - Admission
    - Deaths
  - MEEDS positivity rates 2008-2010
Defeating Malaria is Possible

- Malaria prevalence rates have decreased by 73% (2007 - 2010); fewer Zanzibaris have malaria parasites.
- Deaths attributed to Malaria have been dramatically reduced, from 35% in 2007 to 5% in 2009.
- For example: 5 years ago, our pediatric ward was overcrowded sick children every night; today, we have less than 10.
Malaria prevalence 1927-2010

<table>
<thead>
<tr>
<th>Year Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1958</td>
<td>before eradication campaign</td>
</tr>
<tr>
<td>1958-1968</td>
<td>eradication campaign WHO</td>
</tr>
<tr>
<td>1999-1983</td>
<td>after eradication</td>
</tr>
<tr>
<td>1984-1989</td>
<td>Malaria control project USAID</td>
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<tr>
<td>1990-2005</td>
<td>before RBM scale up</td>
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<tr>
<td>2006-2010</td>
<td>after scale up</td>
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</tbody>
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Malaria trends 1960-2010

- Colonial era (<1960): 74.2
- Eradication campaign (1960-1969): 6.3
- After eradication campaign (1970-1985): 45.8
- During IRS project (1986-1989): 36.0
- Pre RBM scale up (1990-1999): 45.4
- Early RBM years (2000-2005): 12.5
- After RBM scale up (2006-2010): 1.0
Malaria prevalence 2002-2010

2002-2005 before RBM scale up
2006-2010 after scale up
Malaria admissions

Monthly

Annual

# of malaria admissions

Jan-99  Oct-99  Apr-00  Jul-00  Oct-00  Jan-01  Apr-01  Jul-01  Oct-01  Jan-02  Apr-02  Jul-02  Oct-02  Jan-03  Apr-03  Jul-03  Oct-03  Jan-04  Apr-04  Jul-04  Oct-04  Jan-05  Apr-05  Jul-05  Oct-05  Jan-06  Apr-06  Jul-06  Oct-06  Jan-07  Apr-07  Jul-07  Oct-07  Jan-08  Apr-08  Jul-08  Oct-08  Jan-09  Apr-09  Jul-09  Oct-09  Jan-10

# of malaria admissions

1999  2000  2001  2002  2003  2004  2005  2006  2007  2008  2009  2010

5 < years  5+ years

1999  2000  2001  2002  2003  2004  2005  2006  2007  2008  2009  2010

5 < years  5+ years
Annual Malaria Positivity Rate

- Annual Malaria Positivity Rate
  - 30%
  - 35%
  - 40%
  - 45%

- Malaria positivity rate
  - <5 years
  - 5+ years

- Graph showing annual malaria positivity rate from 1999 to 2010:
  - 1999: 35%
  - 2000: 30%
  - 2001: 25%
  - 2002: 20%
  - 2003: 15%
  - 2004: 10%
  - 2005: 5%
  - 2006: 0%
  - 2007: 0%
  - 2008: 0%
  - 2009: 0%
  - 2010: 0%
Malaria deaths

Monthly

Annual

# of malaria deaths

5 < years  5 + years

0  5  10  15  20  25  30  35


0  50  100  150  200  250  300

1999  2000  2001  2002  2003  2004  2005  2006  2007  2008  2009  2010

# of malaria deaths

5 < years  5 + years

0  5  10  15  20  25

Malaria Surveillance

Epidemiological

• MEEDS
  – Rapid response
  – Re-active Case Detection
  – Pro-active case detection (hotspots)

Entomological

• Routine entomological monitoring
  – Vector behavior
  – Insecticide efficacy
  – Insecticide resistance
Confirmed malaria cases
90 MEEDS sites, 2010

2010

- < 5 yrs
- ≥ 5 yrs
- rainfall

Malaria cases

Weekly rainfall (mm)

Week
Challenges

Vector control: insecticide monitoring 2010 reported

- High level of Pyrethroid resistances (permethrin and lambda-cyhalothrine) on Pemba Island; 60%.
- The role of IPT for malaria in pregnancy in Zanzibar
- Change of professional and community attitude on current malaria situation
  - Negative slide/RDT treated as malaria case
  - Accepting laboratory results (-ve) when malaria syndromes presented
Risk of Malaria Resurgence

• Zanzibar’s history: in the last 40 yrs, 2 major malaria episodes took place that resulted in deaths and illness

• This demonstrates how vulnerable my island is to this preventable and treatable disease

• Not having this happen again, calls for leadership and collective efforts (resources, capacity and tools) from partners and stakeholders
Thank you for your attention