Role of Outdoor Transmission Control to Contain / Eliminate Multidrug Resistance Foci in Mekong Countries
Pailin Malaria 2008-2012

Monthly Pf cases, Pailin HIS and VMW, 2008-2012

No of Cases

Year-Month

Total Pf - HIS  Total Pf - VMW

Monthly Pv cases, Pailin HIS and VMW, 2008-2012

No of Cases

Year-Month

Total Pv - HIS  Total Pv - VMW
Interventions

• May-July 2009:
  – Universal, complete LLIN coverage at 1 family-size per person
  – Institution of community-based diagnosis and treatment
    • RDT: Pf/pan
    • ACT: dha-p
  – “Plus”
    • LLINH to every family for forest-use
    • LLIN loaner scheme for seasonal farm workers
    • IEC – billboards, radio, TV, taxi drivers, multi-lingual
Pailin

• 4 years later, after aggressive intervention, people are already forgetting what “Pailin” meant. This was the place that symbolised multi-drug resistance.

• Now Pf is so low that we cannot make sample size for Therapeutic Drug Trials.
Cambodia

• Early 2012, completed a universal coverage campaign of 1 LLIN per person for 3 million people at risk of malaria.
Residual Malaria

• Good name, because that is where we are at, but which species? After the easy gains of LLIN distribution and VMW coverage, Pv remains/becomes dominant.

• Removing the camoflage of dominant Pf, Pv can seem to increase, but how many mixed infections are missed, because Pf is so obvious, and Pv not
Residual Malaria

• Mobile Malaria Clinics
  – Current tactic for dealing with unaffiliated, ad hoc, tropical aggregations of workers.
  • Prevention of deaths, reduction of cases.
– Most difficult-to-reach of all groups
– Exploitive of economic opportunity – get rich – no “long-term” because so impermanent.
– Restricted by GF accounting rules from giving unaccountable nets (need verifiable proof of delivery)
Residual Malaria

• Important to not lose sight of truth:
  – Maintaining village-based LLIN coverage maintains low incidence
    • Anophelism without malaria
  – then can deal with the residual cases, hard-to-reach, outdoor, early biting, etc.
## Cambodia TES Results

<table>
<thead>
<tr>
<th>A+Mef</th>
<th>Pailin</th>
<th>Battambang</th>
<th>Pursat</th>
<th>Oddar Meanch</th>
<th>Preah Vihear</th>
<th>Rattanakiri</th>
<th>Snoul</th>
<th>Kgp Speu - Oral</th>
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</thead>
<tbody>
<tr>
<td>2001</td>
<td>-</td>
<td>50 96%</td>
<td>-</td>
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<td>-</td>
<td>83 95%</td>
<td>-</td>
<td>36 97%</td>
<td>75 100%</td>
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<tr>
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<td>55 93%</td>
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<td>92 98%</td>
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<td>66</td>
<td>100% 97%</td>
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<tr>
<td>2004</td>
<td>90 90%</td>
<td>-</td>
<td>85 93%</td>
<td>-</td>
<td>85 100%</td>
<td>80 100%</td>
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<tr>
<td>2005</td>
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<td>55 94%</td>
<td>89 90%</td>
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<tr>
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<td>44 98%</td>
<td>67 90%</td>
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<td>64 100%</td>
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<tr>
<td>2009</td>
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<td>-</td>
<td>49 98%</td>
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</table>
## Cambodia TES results

<table>
<thead>
<tr>
<th>Year</th>
<th>DHA-Pip</th>
<th>Pailin</th>
<th>BTB</th>
<th>Pursat – Veal Veng</th>
<th>Preah Vihear / Rattana kirid /Veun Sai</th>
<th>Kratie /Snoul</th>
<th>Kpg Thom - Sandan</th>
<th>Kpr Speu /Oral</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
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Notes:
- 100% indicates 100% coverage or achievement.
- Malarone refers to the brand of the medication used.