Monitoring Malaria Parasitemia Prevalence among Pregnant Women at Reproductive and Child Health Clinics in the Lake Zone, Tanzania

INTRODUCTION

• As malaria control interventions are intensively scaled-up, rational approaches are needed for monitoring their impact over time.

• Pregnant women reporting for antenatal care (ANC) at reproductive & child health (RCH) clinics can constitute a sentinel population for malaria surveillance.

OBJECTIVE

• To assess through a pilot study in Kagera, Mwanza and Mara regions in the Lake Zone of Tanzania whether malaria screening at RCH clinics could serve as a practical approach for longitudinal surveillance of malaria prevalence in the surrounding community.

METHOD

• Data were collected from 54 RCH facilities (18 in Kagera, 14 in Mara and 22 in Mwanza) between December 2012 and June 2013. The study is ongoing through December 2013.

• Malaria rapid diagnostic tests (mRDTs) were used to screen pregnant women at time of first antenatal care (ANC) visit.

• Test positivity rates (number mRDT positive/number tested) were calculated. Monthly variation in positivity rate was also assessed.

• All participants who tested positive were treated as per national guidelines.

RESULTS

• Proportion of RCH clinics reported monthly for pregnant women is 86.8%. A total of 27,471 pregnant women attended RCH clinics.

• 59.5% of pregnant women in RCH clinics received testing with mRDT.

• Overall prevalence of malaria parasitaemia among pregnant women was 12.9%.
**Table 1: Summary results of malaria testing in pregnant women at first ANC visit in Kagera, Mara, and Mwanza regions, Tanzania, December 2012-June 2013.**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Kagera</th>
<th>Mara</th>
<th>Mwanza</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of health facility reports expected</td>
<td>126</td>
<td>98</td>
<td>154</td>
<td>378</td>
</tr>
<tr>
<td>Proportion of reports received</td>
<td>89.7%</td>
<td>96.9%</td>
<td>77.9%</td>
<td>86.8%</td>
</tr>
<tr>
<td>Total Attendance</td>
<td>9,425</td>
<td>5,024</td>
<td>13,022</td>
<td>27,471</td>
</tr>
<tr>
<td>Total tested</td>
<td>6,716</td>
<td>4,509</td>
<td>5,108</td>
<td>16,333</td>
</tr>
<tr>
<td>Proportion of participants tested</td>
<td>71.3%</td>
<td>89.7%</td>
<td>39.2%</td>
<td>59.5%</td>
</tr>
<tr>
<td>Malaria positivity (%)</td>
<td>14.0%</td>
<td>12.6%</td>
<td>11.7%</td>
<td>12.9%</td>
</tr>
</tbody>
</table>

**Figure 2: Health facilities reporting rate among pregnant women at their first visit in Kagera, Mara and Mwanza, Tanzania, December 2012-June 2013.**

**Figure 3: Monthly trends of malaria parasitemia for pregnant women at their first ANC visit in Kagera, Mara and Mwanza regions, Tanzania, 2012-June 2013.**

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**CONCLUSIONS**

- Routine screening of these accessible populations may offer a practical strategy for routine continuous surveillance for tracking malaria control progress over time.
- Frequent mRDT stock-outs observed in most health facilities posed a challenge to maintain test rate of more than 90%.
- Despite the challenges of frequent mRDT stock-outs, the positivity rate of malaria for this asymptomatic sentinel population group remains low at approximately 12%.
- Given that only a little over half of pregnant women were tested at first ANC visit, further research and efforts are needed to examine and address barriers to testing among pregnant women.

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