Progress in the Development of Global Strategic Plan for P. vivax Control and Elimination

MPAC meeting
Geneva, 11 September 2013

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Mar Velarde
Richard Cibulskis
Background and Update

- *P. vivax* Strategic Plan to be an integral part of GTS.
- 1\textsuperscript{st} steering committee meeting in November 2012.
- Writing Committee (WC) members identified to:
  - contribute to Thematic Reviews
  - review and bring together information generated from the World Malaria Report, GMP databases, “Country Landscape Briefs,” Thematic Reviews and Regional Overviews
  - help to draft the Strategic Plan.
- WC convened on May 31, 2013 in Barcelona
  - Thematic Review section outlines drafted, tentative timeline agreed.
  - Ten countries selected for Landscape Brief development.
## WORK PLAN

<table>
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<tr>
<th>Steering Group TC/meeting</th>
<th>Writing Committee meeting</th>
<th>Compiling the Evidence Base</th>
<th>2013</th>
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### Compiling the Evidence Base

1. WMR Data Collection & Analysis
2. Country landscapes
   - India
   - Other 9 countries
3. Thematic reviews

### Analysis and Formulation of Strategy

- Regional overviews
- Writing strategic plan
- Writing global report on *P. vivax*
- Finalize database of references
- Finalize Strategic Plan & Report

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**GTS Alignment**
Input

Country Landscape Briefs

- Summary of the program implemented for *P. vivax* control or elimination

**CONTENT:**
- *P. vivax* epidemiology and its trends
- Malaria control interventions - policy and practice of NMCP (especially *P. vivax*-related)
- Analysis and interpretation of the gaps and constraints especially in relation to existing WHO policy guidance

- To be represented by 10 countries (from six WHO Regions)
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<tr>
<th>Country</th>
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<tr>
<td>Azerbaijan</td>
<td>Consultant hired; data collection started; draft expected in Oct.</td>
<td>E.Gasimov/WCO M.Ejov/EURO</td>
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<tr>
<td>Brazil</td>
<td>Andre Siqueira/Univ. of State of Amazonas has agreed to develop the Brief.</td>
<td>M.Lacerda, A. Santelli (MoH), K.Carter/AMR</td>
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<td>Cambodia</td>
<td>NMCP data collection team being formed.</td>
<td>S.Bjorge/WCO, E.Christophel/WPR</td>
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<td>China</td>
<td>Local PH teams in Henan and Yunnan are collecting 20-year data.</td>
<td>S.Zhou/GMP &amp; NIPD (Shanghai)</td>
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<tr>
<td>Ethiopia</td>
<td>CDC/PMI team partially drafted the Brief; a consultant to be hired to collect facility-based data and complete the report.</td>
<td>J.Malone and J. Hwang/CDC-PMI, M.Aregawi/GMP</td>
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<td>India</td>
<td>Gujarat report expected soon.</td>
<td>N.Valecha/IMR, NMCP, MMV</td>
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<tr>
<td>Indonesia</td>
<td>A consultant hired. Expect to review both National Program data and Research data.</td>
<td>A.Joshi/WCO, L.Ortega/SEAR</td>
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<td>Iran</td>
<td>(communication delayed) Replacement with Morocco or Tajikistan being considered.</td>
<td>G.Zhamani &amp; H.Atta/EMRO</td>
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<td>Nicaragua</td>
<td>Alberto Montoya, Dir de Parasitología del CNDR, is working on the Brief.</td>
<td>A.Balmaseda/MINSA, S.Becker-Dreps/UNC Chapel Hill</td>
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<tr>
<td>PNG</td>
<td>TWG Malaria is to form a team with MoH</td>
<td>W.Kazadi/WCO, E.Christophel/WPR</td>
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Thematic Reviews

Review of literature, current development and policy & practice to provide updated program implementation guidance specific to *P. vivax* malaria.

- Biology
- Epidemiology
- Vector Control
- Diagnostic Testing and Treatment (including G6PD deficiency, safe therapy and drug resistance)
- Surveillance and Elimination
- Cost and Cost-Effectiveness
- Research Priorities
Biology

Connecting biology to *P. vivax* malaria case management, control and elimination

- **Background**
  - Main biological *differences between* *P. vivax* *and* *P. falciparum*.

- **Gaps in the knowledge** of *P. vivax* biology
  - e.g. new tools to better understand the molecular/cellular mechanisms of relapse, etc.

- **Essential functional tools** and resources
  - Resources required especially in developing countries

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**Focal Point – P. Olliaro**

**Team:** I. Mueller, B. Campo (MMV), J. Reeder, J. Barnwell, K. Mendis
Epidemiology

- Distribution of Infection
  - Occurrence – geography of Pv (API and prevalence) using the WMR 2013 data and WHO Regional maps
  - “Relapse” – geography and programmatic application

- Cases
  - Clinical cases
  - Trends of Pv cases and Pf/Pv ratio
  - Primary risk groups – age, occupation, urban P. vivax

- Severe P. vivax malaria, mortality
  - Issues of limitation in collecting Pv-specific data
  - Methodology to better estimate cases and deaths

Focal point: E. Shutes
Team: Simon Hay and the Oxford MAP group, P. Kachur (CDC)
• **Current knowledge of Pv transmission**, e.g.
  - “Relapse” and the effectiveness of vector control interventions?,
  - Differences in the roles of key interventions, e.g. LLINs, on the transmission of Pv vs Pf?

• **Ongoing vector mapping projects**
  - Potential benefits to strategic planning of Pv control and elimination?

• **Policy**
  - Gaps in vector control policies globally?
  - A vector control policy that better targets Pv?

**Focal point: A. Mnzava**
**Writer: Jeff Hii, former WPR entomologist**
Diagnosis and Treatment

- **Diagnostics**
  - Infection (ACD, PCD)
  - G6PD deficiency (point-of-care, surveillance, research)

- **Treatment**
  - Blood schizontocidal (ACT, non-ACT, CQ resistance)
  - Anti-Relapse (primaquine regimens, efficacy, safety)
  - Special populations (e.g. pregnancy, G6PDd, prophylaxis)

- **Product Development**
  - New drugs
  - New G6PD diagnostics

Focal points: A. Bosman, J. Cunningham, P. Olumese
Team: R. Price, K. Baird, S. Duparc, N. White, N. Valecha
Challenges in *P. vivax* Surveillance system:

- Diversity of genotypes and phenotypes ➔ prolongation of malaria season.

- Case detection issues:
  - Reduction of clinical cases ➔ reduced efficiency of microscopy
  - Increase of asymptomatic cases ➔ continuation of transmission

- Spread of CQ-resistant *P. vivax* strains

- etc.

**Focal point:** R. Mintcheva  
**Team:** A. Kondrashin, K. Mendis, A.C. Dhariwal
Focal point: R. Cibulskis
Team: S. Yeung, M. White (Imp. Coll.)
Research Priorities

(partial list)

- Safe & effective therapy with primaquine
- CQ resistance and ACT for *P. vivax* malaria?
- Long-term *in-vitro culture* and animal model for *P. vivax*
- Tools for distinguishing relapse, recrudescence and reinfection
- Surveillance & elimination-related issues: asymptomatic carriers, MDA
- The *impact of vector control* intervention on *P. vivax* transmission

**Focal points:** M. Velarde, S. Zhou
**Team:** Q. Bassat, J. Sattabongkot (Mahidol Univ.)
Next steps

• WC meetings in early Nov, mid-Jan

• Begin formulation of strategic plan from November 2013?

• Compiling the evidence review documents and draft a Preliminary Strategic Plan to be ready by January 2014

• Regional consultations to be aligned with GTS (Feb-May 2014)

• Finalize Strategic Plan and Report by June 2014?