### Meeting Summary

**APMEN Vivax Working Group Business Meeting**

Intercontinental Hotel, Jimbaran, Bali; 4 March 2013
Pandawa Room

**Attendees:** Vivax Working Group (VxWG) Members:

<table>
<thead>
<tr>
<th>Country Partner Representatives</th>
<th>Partner Institutes</th>
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<tbody>
<tr>
<td>Bhutan – Tashi Peldon</td>
<td>Australian Army Malaria Institute, Brisbane – Dennis Shanks</td>
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<td>Cambodia – Kheng Sim</td>
<td>Burnet Institute, Melbourne – Jack Richards</td>
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<td>China – Gao Qi</td>
<td>Eijkman Oxford Clinical Research Unit, Jakarta – Kevin Baird</td>
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<td>Indonesia – Niken Wastu Palupi,</td>
<td>Menzies School of Health Research, Darwin – Nick Anstey</td>
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<td>Malaysia – Tim William, on behalf of Christina Rundi</td>
<td>WHO, Global Malaria Program – Richard Cibulskis</td>
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<td>Nepal – Garib Das Thakur</td>
<td>Foundation for Innovative New Diagnostics (FIND), Geneva – David Bell</td>
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<td>Philippines – Effie Espino</td>
<td>APMEN Secretariat</td>
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<td>Republic of Korea – Jung-Yeon Kim</td>
<td>University of Queensland, Brisbane – Maxine Whittaker</td>
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<td>Thailand – Sugarum Rangniran</td>
<td>Global Health Group, San Francisco – Roly Gosling</td>
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<td>Solomon Islands – Lyndes Wini</td>
<td>Vivax Working Group Coordinating Team</td>
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<td>Sri Lanka – Warahena Gunasekera</td>
<td>Menzies School of Health Research, Darwin – Ric Price (Chair), Lorenz von Seidlein, Amanda Murphy, Sarah Auburn</td>
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<td>Vanuatu – Edward Tambisari</td>
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<td>Vietnam – Duc Thang Ngo</td>
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Observers:

Saowanit Vijaykadga – Kenan Institute, Asia
Carol Sibley – WWARN (WorldWide Antimalarial Resistance Network)
Simon Hay – MAP (Malaria Atlas Project, University of Oxford)
Catherine Moyes and Rosalind Howes – MAP
Ferdinand Laihad – UNICEF Indonesia
Michelle Hsiang – Global Health Group, San Francisco

AGENDA SUMMARY

Business meeting (Closed Session)

13.30 – 14.00           Review of 2012: Lorenz von Seidlein
                         Discussion

14.00 – 14.30           Proposed 2013 Workplan: Ric Price
                         Discussion

14.30 - 15.30           Revisiting APMEN VxWG Research Priorities
                         Discussion & Vote on Travel Bursary Award
MEETING SUMMARY

1. Review of the Vivax Working Group progress: Lorenz von Seidlein, Clinical Coordinator VxWG

1.1 Welcome

Two new members were welcomed into the Vivax Working Group:
- Vietnam represented by Duc Thang Ngo
- Nepal represented by Garib Das Thakur

1.2 Workshops

The VxWG reviewed the workshops that have been held to date:
- 2010: Colombo Sri Lanka: establishing the Vivax research priorities
- 2011: Kota Kinabalu, Malaysia: Genotyping
- 2011: Jiangsu China: Planning a multicenter primaquine trial
- 2012: Incheon, Korea: Detection of G6PD deficiency
- 2013: Bali Indonesia: The threat of antimalarial resistance

Outcomes of these meetings have been shared with the broader network and to a wider audience through workshop reports, and publication in scientific journals. These meetings have been well attended and continue to attract interest and contributions from within and outside the Network.

1.3 Country Partner Technical Development Program

A brief overview of the program to date highlighted:
- The process by which the program was established following the meeting in Sri Lanka (2010)
- The evaluation criteria for applications and funding mechanisms for projects
- The total number of projects funded: 22 projects approved, and total funding of $882,608
- Progress to date of the research projects funded

1.4 Primaquine Pilot Studies

Primaquine pilot study activities have been ongoing since 2011, when several Country Partners identified the need to clarify the safe and optimal use of primaquine to treat the dormant liver stage of *P. vivax* infection. Dr Lorenz von Seidlein presented a review of progress to date, which included:

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1 Von Seidlein et al. Review of key knowledge gaps in glucose-6-phosphate dehydrogenase deficiency detection with regard to the safe clinical deployment of 8-aminoquinoline treatment regimens: a workshop report. *Malaria* 2013 (12)112; [http://www.malariajournal.com/content/12/1/112](http://www.malariajournal.com/content/12/1/112)
• **Literature review: Malaria research in the Asia Pacific** – presented to Country Partners in 2011

• **Primaquine Clinical Trials Workshop (Jiangsu China, 2011)** – 12 APMEN countries and 5 partner institutions participated in this 3 day meeting, focusing on study design, and ethical and logistical challenges of conducting primaquine clinical trials.

• **Detection of G6PD Deficiency Workshop (Incheon Korea, 2012)** – discussion and outcomes of this meeting were published in *Malaria* journal: [http://www.malariajournal.com/content/12/1/112](http://www.malariajournal.com/content/12/1/112).

• **Study planning and protocol development** – has taken place through ongoing meetings and collaboration with Country Partners who expressed interest in the 2011 workshop. Trial registrations, ethics approvals and site visits have taken place in Bhutan, Malaysia, Vanuatu and Solomon Islands, with studies ready to commence in these sites. The decision to commence studies in these sites has been dependent on numerous factors including in-country resources and infrastructure.

In addition to clarifying optimal treatments for *P. vivax* malaria, it is hoped that APMEN's contribution to conducting the trials will support the development of increased clinical trial capacity and skills in these countries.

1.5 **Genotyping activities**

The *P. vivax* genotyping work of the VxWG aims to provide a standardised framework to support transmission mapping studies in APMEN countries. Dr Sarah Auburn, Senior Research Officer of the VxWG Coordinating Team, reviewed the progress of genotyping activities to date including:

• **Workshops and meetings** – the first workshop was held in Kota Kinabalu in 2011 where discussions began on sharing and pooling genetic data. Following this, the Country Partners agreed to use standardized protocols for collecting *P. vivax* data. During the annual meeting in 2012, a Genotyping Action plan was developed to direct future genotyping activities.

• **Genotyping Research Projects** – seven genotyping research projects have been funded through the VxWG Country Partner Technical Development Program in China, Indonesia, Malaysia, Bhutan and Sri Lanka. Dr Auburn has been working closely with grant recipients to provide technical support and expertise, including development of online support tools, as well as conducting laboratory training sessions at Menzies School of Health Research.

These activities aim to support malaria control activities by providing a novel mechanism for National Malaria Control Programs to examine the degree to which malaria is transmitted locally or is imported.

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2. Proposed 2013 Workplan: Ric Price, Chair VxWG

In this session the VxWG discussed:

- the objectives of the group
- the proposed activities for 2013
- successes and key considerations
- potential role and priorities for the VxWG in the next phase of APMEN

2.1 Overview of VxWG objectives and focus

The original and current Terms of Reference (ToR) for the Vivax Working Group are:

- Identifying knowledge gaps and operational research priorities
- Funding catalytic research projects and facilitating their implementation, analysis and feedback
- Sharing research and operational experience between APMEN countries
- Partnership activities and collaborations with key stakeholders such as MAP, WWARN, FIND and Global Health Group (GHG)
- Developing a series of integrated translational research programs, including implementation of primaquine pilot studies in at least two sites
- Advocating for improved funding for *P. vivax* control and research activities

Within these ToR, the VxWG activities have been centred around three main translational themes for *P. vivax* elimination: Surveillance, Diagnostics and Therapeutics.

Research within these themes has been explored and progressed by the VxWG through a combination of literature reviews, workshops, research grants, resource development, and clinical studies.

The largest body of work that has commenced to date has been the Country Partner Technical Development Program, which has to date invested in 22 small research projects across the region, many of which are now reaching completion. The next stage will be to translate the results from this work into operational practice across the Network. Ideally, in the coming months, the VxWG will begin to look at practical ways to use the research findings and knowledge that have been generated to inform the work of malaria control programs and policy makers.

2.2 Feedback from Country Partners on VxWG activities and priorities

Each Country Partner was asked to provide feedback on the activities and focus of the VxWG to date, especially as it relates to their own National Malaria Control Program. The feedback can be summarised into five main categories:
1. **Partnerships** – the ability to access the expertise available within the VxWG and broader APMEN Network was seen as essential in building research capacity and to enable optimization and standardization of malaria control techniques/tools.

2. **Research and knowledge translation** – the Group expressed the importance of ensuring the information generated by the VxWG activities is shared amongst the Network, in order to be adopted by country programs.
   It was requested that guidelines be developed to assist country programs with translation of research knowledge into practice, and that these be flexible enough to adapt to the different needs and stages of each country.

3. **Technical support** – the Partners expressed the need for more support to: analyse and share data, to complete publications, and to develop and implement new techniques/technologies.

4. **Cost effectiveness** – the VvWG Research Program is seen to be valuable and cost-effective.
   It would be useful to quantify the financial or in-kind contributions made by Country Partners to their projects.

5. **Advocacy** – the Group expressed the importance of continued advocacy to fight *P. vivax* malaria, and APMEN’s globally important role in this.

### 2.3 Continuation of the Vivax Working Group

The country Partners considered whether the Vivax Working Group should continue in its current form into the future. The answer was a unanimous yes.

Some of the reasons given were:

- The VxWG contributes important evidence necessary to achieve *P. vivax* elimination. The VxWG grant program and meetings improve research and malaria program capacity through allowing interaction with regional experts.
- *Vivax* malaria is a persistent and/or rising priority in many countries, and the VxWG provides an important forum to bring researchers and program managers together to identify the steps and necessary knowledge required to target this problem.
- The VxWG is very good at supporting APMEN countries to work together— it is important that this continue. This support contributes to inform program and policy decisions, although examples of this need to be highlighted.
- Some countries are still in the early stages of combating *P. vivax* and rely on information and evidence from other countries to continue effectively. APMEN is a unique institution for information on *P. vivax*.
- It is crucial to develop new tools to assist in elimination of *P. vivax* such as RDTs and G6PD testing.
- The VxWG provides a forum for learning, sharing and translation of information to policy makers – this is strengthened by learning information and current practices from other countries.

Country Partners agreed to assist in advocating for the continuation of the VxWG. Going forward, more emphasis needs to be placed on articulating and communicating Country Partner priorities and challenges to researchers.
3. Revisiting APMEN VxWG Research Priorities

VxWG research priorities were reviewed. These were first defined in Sri Lanka (2010), and modified in Malaysia (2011) and Korea (2012). The group was asked to share their thoughts on future priorities. It was suggested that common goals might be identified despite different countries being at different stages of vivax control and elimination.

The following suggestions were made in identifying new research priorities:

1. **Increase support for operational research** according to each country’s needs and stage, and expand research to be able to address emerging themes according to the unique challenges of the Asia Pacific region e.g. protecting border areas, tackling drug resistance, emergence of additional malaria species to combat.

2. **Identify implementation strategies** that will be realistically effective in the field, and to translate the knowledge/evidence we already have into practice.

3. **Improve surveillance & diagnostic techniques** e.g. population seroprevalence and surveys of subpatent parasitaemia – and support provision of reliable, consistent and effective diagnostic and surveillance tools to all countries.

4. **Identify & deliver effective treatment** e.g. generating the evidence required for safe and effective use of primaquine.

5. **Identify collaborative opportunities** within each of the research themes, and encourage both ‘individual’ and ‘common’ priorities of countries across the network.

4. Vote on VxWG Travel Bursary

Following a series of research presentations given on the morning of the Business Meeting, the Working Group agreed to provide financial assistance to one outstanding Research Grant recipient to attend the *Advances in Plasmodium Vivax Malaria Research* conference to be held in Barcelona, Spain in May 2013.

Following discussions and voting by Country Partner and Partner Institute representatives, Dr Ari Winasti Satyagraha, from the Eijkman Institute of Molecular Biology in Indonesia, who had presented the findings from her Round 1 Small Grant project “Survey of G6PDd variants on Sumba Island and development of PCR primers for each”.

Dr Satyagraha will have all travel costs associated with her attendance at the Barcelona meeting reimbursed by the Working Group.

5. Concluding Comments

The Chair closed with meeting by summarizing the meeting outcomes and reiterating the importance of continued work and advocacy for *P. vivax* and APMEN:

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Priority Actions for the VxWG:

1. Develop guidelines for facilitating the process of adaption and use of findings from the Country Partner Technical Development Program for National Malaria Control Programs.
2. Work to ensure continued technical support is provided to partners to develop the tools they need to address challenges in eliminating *P. vivax* in their countries.
3. Identify the major operational challenges that Country Partners are facing at a national level and incorporate these into future research activities.
4. Continue to identify and promote the financial and in-kind contributions made by Country Partners, and advocate for additional funding.
5. Identify both individual country priorities, and shared priorities between countries, and promote collaborations to address these within the Network.

*** Meeting Close ***