The Ascendancy of *P. vivax*

*P. vivax*...

- A significant direct and indirect cause of morbidity and mortality
- More challenging to eliminate than Pf
- The dominant cause of malaria in Asia
- Elimination demands complementary evidence based control strategies
Vivax Working Group

Translational research to influence policy and practice:

Targeting Vivax Malaria in the Asia Pacific 2009-2014, [www.apmen.org](http://www.apmen.org)
1. Knowledge Gaps

Research Priorities:

Columbo, February 2010

1. Optimizing the treatment of blood stage
2. Understanding relapse and achieving radical cure
3. G6PD deficiency - risks, prevalence and diagnostics
4. Diagnostics for case management and population surveillance
5. Public Health, Monitoring and Evaluation

Kota Kinabalu, May 2011

1. Surveillance
   - Parasite and host
2. Diagnostics
   - G6PD and ultra sensitive RDT
3. Radical Cure
   - Schizonticidal and hypnozoitcidal
2. Building Consensus

Agreeing on the way forward

Sharing:
- experience
- information
- data
- technology

Building Trust

Co-funded workshops:
- Genotyping workshop (x2)
- Clinical Trials workshop (x2)
- G6PD workshop (x2)
- Antimalarial resistance workshop
A Dynamic Forum

National Malaria Control Programs

Public Private Partnerships
Researchers
Industry
World Health Organisation
Funders
Networks

DFAT
Bill & Melinda Gates Foundation
MMV
PATH
GSK
World Health Organization
APMEN
Asia Pacific Malaria Elimination Network

map
WWARN

GlaxoSmithKline
Medicines for Malaria Venture
3. Generating the Evidence

Research projects funded through the Country Partner Technical Development Programme

Main thematic areas:

**Surveillance**: Host (G6PD) and Parasite

**Diagnostic**: Host (G6PD) and Parasite

**Treatment**

21 Projects in 12 countries

$820,000
3.1 Parasite Surveillance

Burden of Disease
Partners with:

Genotyping
Consensus microsatellite markers
VivaxGen – Online platform
3.1 Host Surveillance – G6PD

Identifying Populations at Risk

Cross sectional surveys:
3.2 Diagnostics

Parasite

Novel PV and Sensitive Diagnostics
Field applicability / Robustness
Partnered with:

Host

Assessing novel G6PD diagnostics
Partnered with:
3.3 Treatment

PQ and CQ Literature Reviews

Clinical Trials
- Bangladesh – CQS
- Bhutan – CQS
- Sabah – CQR
- Solomon Islands – Pq studies

Partnered with:

http://www.wwarn.org/vivax/surveyor/
## Deliverables Projected in 2011

<table>
<thead>
<tr>
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Publications
4. Influencing Policy
Examples of Policy Impact

**Bhutan**

Mobile Phone Technology for mapping cases in remote areas

**Malaysia**

High Grade CQR *P. vivax*

ACT works well against *P. knowlesi*

National Treatment Guidelines revised to Mfq + Artesunate

*CID 2016*

*Lancet ID 2015*
THREATS:
• Staff turnover
• Expansion of network
• Sustained relevance
• Sustained funding
• Loss of momentum

OPPORTUNITIES:
• Platform for collaboration: MAP, MMV PATH, WWARN...
• Forum to present important clinical trials: SToP MiP, TRACII
• Leverage co-funding
• Capacity Building
Capacity Building...

Jontari Hutagalung: Indonesia
Surveillance of G6PDd

Sonam Wangchuck: Bhutan
Building lab capacity and PCR capacity

Ari Winastti – mapping G6PDd and variants
Lenny Ekawati – treatment seeking behaviour

Zhou Shui-sen: China
Surveillance MAP

Saorin Kim
Quantifying the risk of haemolysis and use of FST

Huyan Zhou: China
G6PDd prevalence

Wasif Ali Khan: Bangladesh
Clinical Trial
What Next?

Current Focus…
• Optimising the safe use of Primaquine
• Defining the extent of CQR *P. vivax*
• Paving the way for Tafenoquine

Process…
• Flexible – adapting to the current needs
• Regularly realign with NMCP priorities
• Less talk, more action

Accountability and Transparency…
• Promote open access and data sharing platforms
• Clear metrics and milestones
• Timelines for deliverables towards elimination by 2030
THANK YOU
APMEN
Vivax Working Group
2014
Parasite Elimination

Killing: All Stages, All Species, In all Hosts

- Geospatial Mapping
  - Parasite Prevalence
  - Drug Resistance

- Clinical Trials
  - Safety, Efficacy and Effectiveness
  - Pharmacokinetics

- Operational Research
- Transmission Studies
- Parasite & Host Genetics

- Diagnostics
  - G6PD
  - Subpatent parasitaemias

- Drug Discovery

- Access & Delivery

- Health systems strengthening

- Radical Cure of *P. vivax*
- Transmission Reduction
- Retard the spread of Artemisinin Resistance