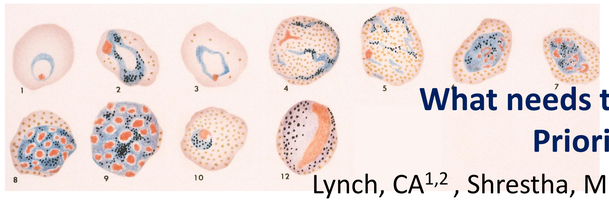

What needs to be done to address vivax malaria in the Asia Pacific? Priorities of National Malaria Program and partners

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Vivax Working Group

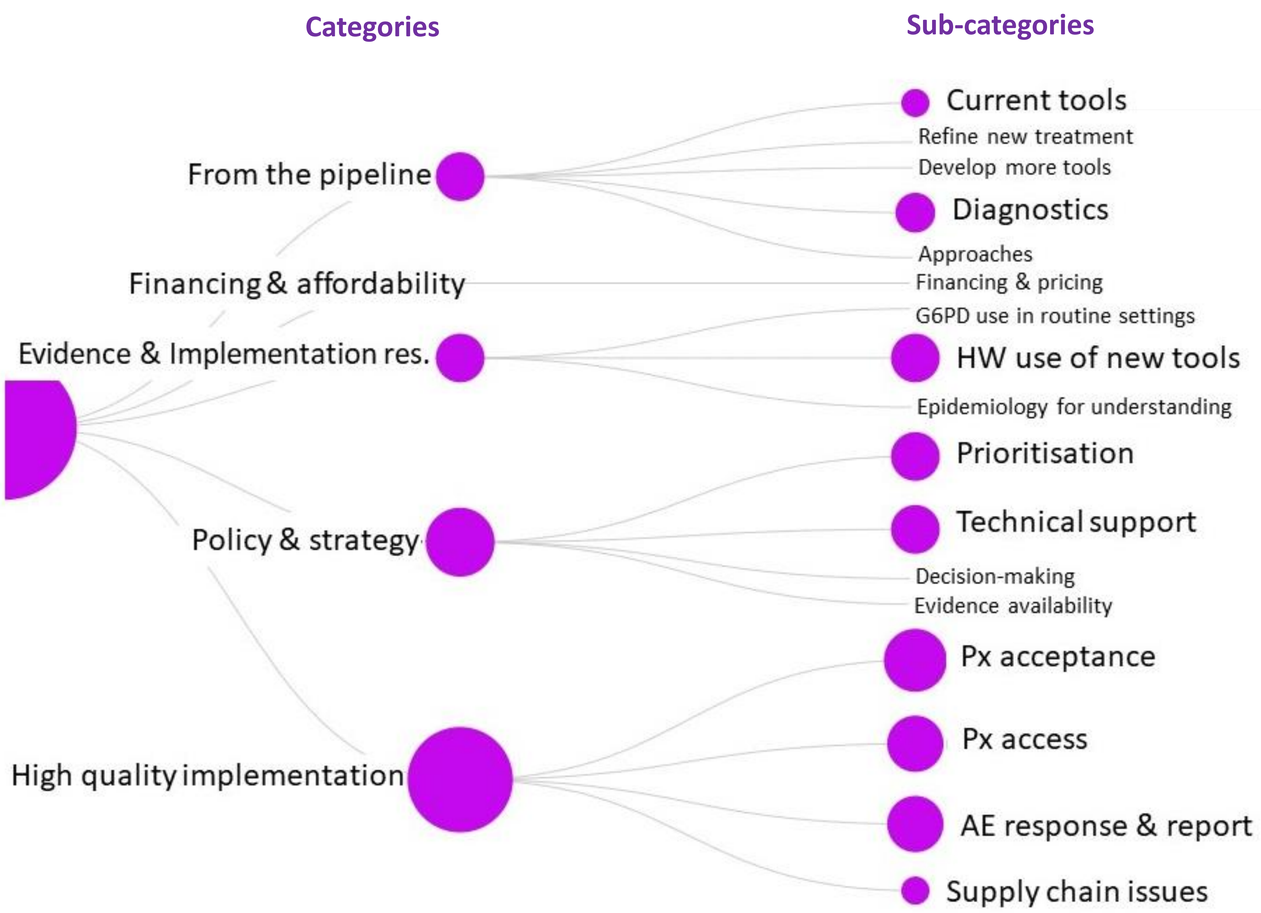
Background

- The estimated proportion of vivax malaria patients receiving appropriate treatment in the Asia Pacific is unknown but estimated to be low (Recht et al., 2018). Many countries, including those in the Asia Pacific, are close to their goals of eliminating malaria by 2030 but now must consider the vivax malaria burden as it becomes the dominant species. Vivax is challenging to treat because it has a dormant stage (hypnozoite) in the liver that can re-emerge to cause new infection without transmission from an infected mosquito.
- The WHO recommended treatment for this stage primaquine over 14 days. However, 8-aminoquinolines (8-AQs), such as primaquine or the newly available tafenoquine, can cause haemolysis in patients with a deficiency of the enzyme Gluclose-6-Phosphate-Dehydrogenase (G6PD). Depending on the context, and the total overall dose of 8-AQs this could necessitate a test and therefore the introduction of a new diagnostic into the patient pathway. With limited emphasis on elimination of vivax malaria in the WHO Global Technical Strategy for malaria (WHO, 2021), and limited implementation of radical cure treatment policies (Recht, 2018) there is a significant gap in our understanding of stakeholders' current priorities to achieve vivax elimination.
- Additionally, new tools such as higher-sensitivity Rapid Diagnostic Tests (RDTs), near-patient G6PD tests, shorter course primaquine (7 days), tafenoquine (single dose) are becoming available for more effective case management of vivax malaria. In this context**, we have sought to identify the key priorities for National Malaria Programs and partners across the Asia Pacific that need to be addressed to achieve their malaria elimination goals.**

Methods

- A Theory of Change framework was used to systematically identify key research and implementation questions that, if left unaddressed, could prevent countries from achieving their 2030 elimination goals. Through online workshops - National Malaria Programs (NMPs) and other stakeholders ranked questions (1-lowest, 5-highest priority) most important for achieving vivax elimination.
- Two methods were used to identify priority questions: 1. % stakeholders that ranked a question highest priority and 2. Mean overall rank for the question. For both, the 75th and 95th percentiles were calculated and the level of agreement between those two scorings used to categorise questions as high, medium-high and medium priority.

High & medium-high priority areas for National Malaria Programs and partners that need to be addressed to achieve malaria elimination Asia Pacific region (n=101)



Results & conclusions

- Most priorities were identified under implementation and implementation research categories and sub-categories.

- The highest ranked questions (>95% percentile for both measures) were;
  - **Availability of stock and patient data,**
  - **High quality Healthworker (HW) training,**
  - **HW capacity to adhere to new or current protocols,**
  - **Effective support supervision for new tool use,**
  - **Patient (Px) adherence and,**
  - **Patient reporting of adverse events (AE)**

- Medium-high & medium priorities include; **understanding the safety of shorter course primaquine, deployment of higher sensitivity RDTs for vivax, WHO revision of vivax treatment guidance, support to decide between different radical cure options, and ensuring access to new tools.**

- Training and supervision have consistently been raised as priorities by all stakeholders. This is an oft overlooked area, yet, it constitutes major expenditure by both external donors and governments (Leslie, 2016).

- Pharmacovigilance and, in particular, patient awareness of adverse events is consistently ranked as a priority among all stakeholders.

- Interestingly, stakeholders felt that financing or pricing were not priority issues in the region despite the additional costs of integrating both a testing device and test strip into routine care. This potentially reflects confidence in evidence-based approaches and timely global policy to unlock financing to support introduction of these tools

What next?

- In the Greater Mekong Subregion, through PAVE, ongoing and planned activities were mapped to determine what NMP priorities are already being addressed.
- For the Asia Pacific region, similar mapping is underway and where gaps remain, the APMEN Vivax Working Group is advocating to research, technical and funding partners to provide support in key areas
- National Malaria Programs will further validate findings during the upcoming APMEN Vivax Working Group meeting (Dec 2022) and identify any remaining gaps and how those gaps can be addressed as they seek to eliminate malaria in their region.

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