This document was prepared as a pre-read for the meeting of the PAHO Malaria Technical Advisory Group and is not an official document of PAHO/WHO

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MALARIA TECHNICAL ADVISORY GROUP MEETING

7-8 June, 2017. Washington DC, USA

REGIONAL GUIDANCE ON THE IMPLEMENTATION OF G6PD TESTING AND RADICAL CURE IN *P. VIVAX* ENDEMIC COUNTRIES

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FIRST PART

BACKGROUND

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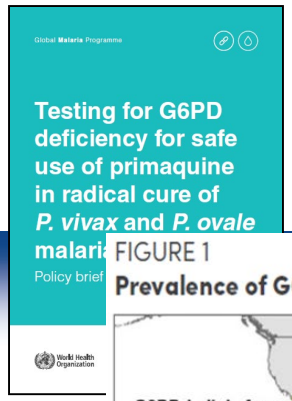


Testing for G6PD deficiency

FIGURE 1

Prevalence of G6PD deficiency

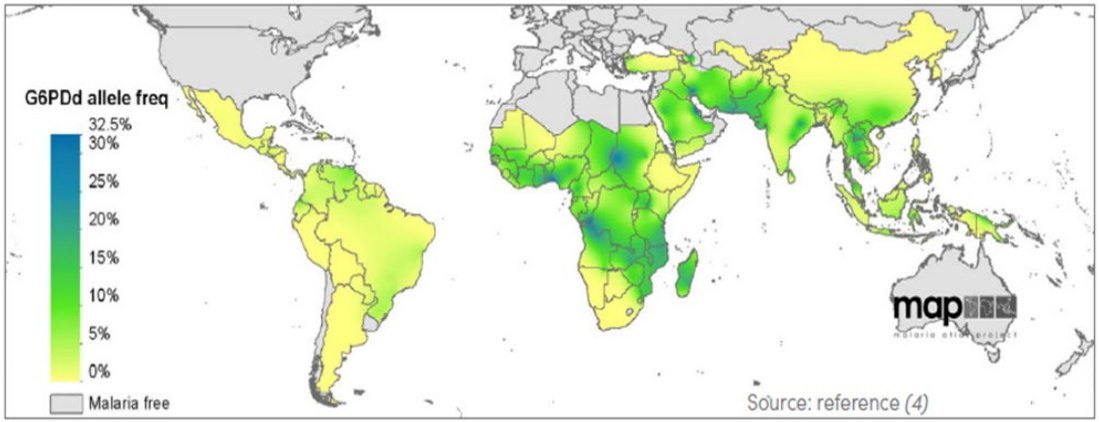
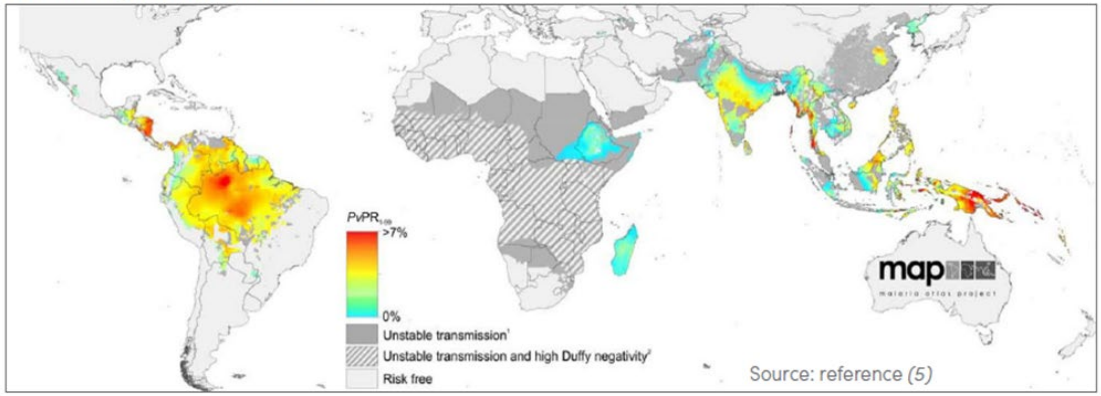


FIGURE 2

Endemicity of *P. vivax* in 2010



350 million people affected globally

Prevalence varies from 3% to 35% in tropical areas

>180 different G6PD deficiency genetic variants

Two of the most prevalent variants represent the two ends of the severity spectrum:

- **Africa A– :** sub-Saharan Africa, and African-Americans (mild)
- **Mediterranean:** Europe, West and Central Asia, and northern India (severe)

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WHO RECOMMENDATIONS:

- The G6PD status of patients should be used to guide administration of primaquine for preventing relapse.
- To prevent relapse, treat P. vivax or P. ovale malaria children and adults (except pregnant women, infants aged <6 months, women breastfeeding infants aged <6 months, women breastfeeding older infants unless they are known not to be G6PD deficient and people with G6PD deficiency) with a 14-day course of primaquine at 0.25–0.5 mg/kg body weight daily in all transmission settings.
- In people with G6PD deficiency, consider preventing relapse by giving primaquine base at 0.75 mg/kg body weight once a week for 8 weeks, with close medical supervision for potential primaquine-induced haemolysis.
- When a patient's G6PD status is unknown and G6PD testing is not available, a decision to prescribe primaquine must be based on an assessment of the risks and benefits of adding primaquine.
- For women who are pregnant or breastfeeding, consider weekly chemoprophylaxis with chloroquine until delivery and breastfeeding are completed; then, on the basis of the woman's G6PD status, treat with primaquine to prevent future relapse

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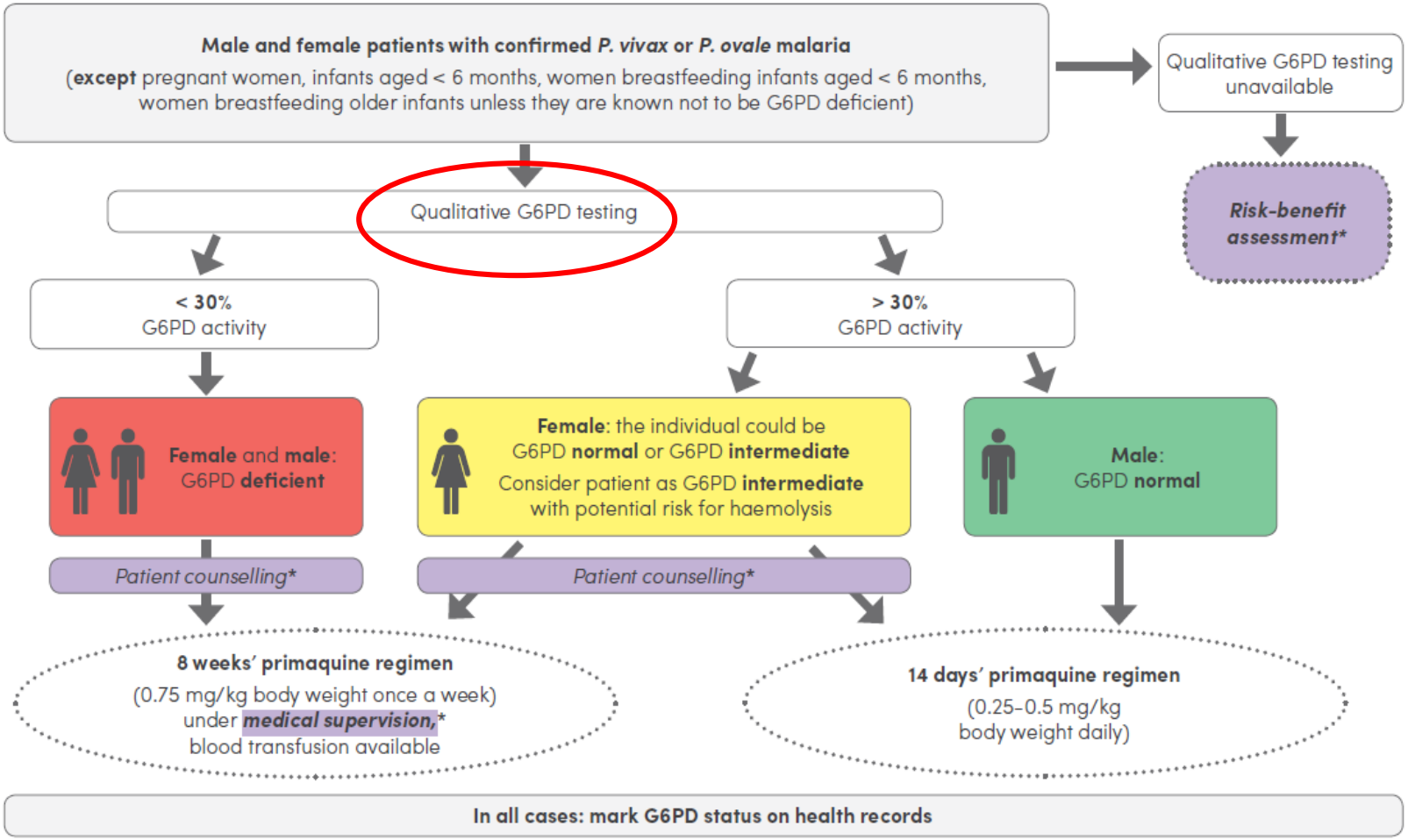
HOW



* *More information on risk-benefit assessment, patient counselling and medical supervision is provided in the text.*

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Contextual elements in the Americas

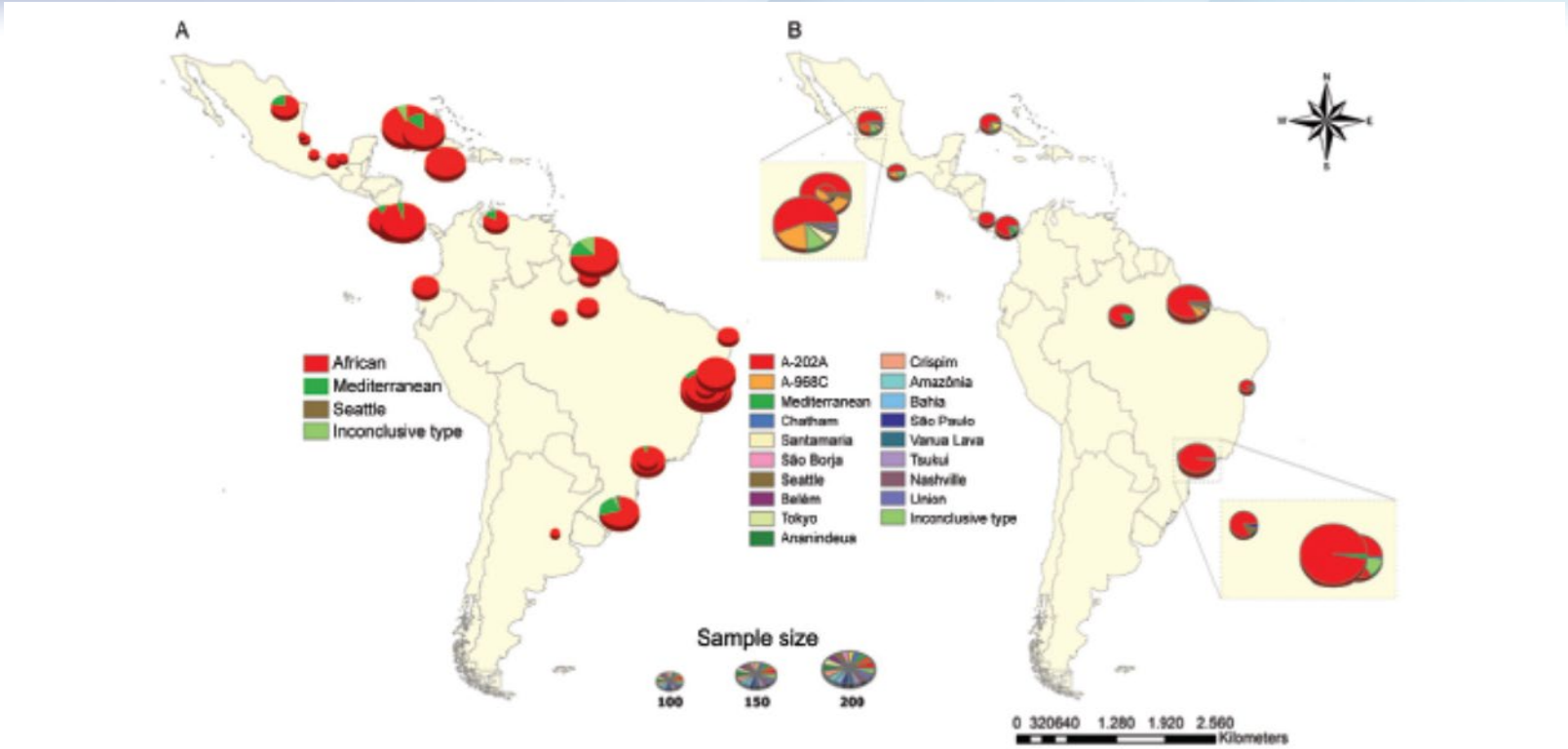

Fig. 2: spatial distribution of glucose-6-phosphate dehydrogenase deficient variants characterised by gel electrophoresis (A) and molecular analysis (B) in Latin American and Caribbean community-level studies. Sample size is reflected in the size of the pie charts.

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Contextual elements in the Americas

Risk

- Factors in favour of use of PQ without testing:
  - Low prevalence of G6PD deficiency in general, mainly the A- variants
  - Widespread use of primaquine for many decades, without reported side effects
- Factors against the use of PQ without testing:
  - Reported cases of severe haemolysis in some localities in Brazil, including reports from autopsy studies;
  - Population at greater malaria risk living in rural communities, hard to reach population (Amazon);

  Additional issues to consider for a risk-benefit analysis:
  - Population heterogeneity and Amerindian genealogy in large proportions of the populations. High variability in G6PDd findings even within the same local areas in specific countries (Pacific coast in Colombia from 2% - 12%).

Contextual elements in the Americas

Benefits

- Predominance of P. vivax infection in areas close to elimination as well as in areas of high burden.
- High relapse rates. Prevention of relapses is a key element to reduce vivax transmission and achieve malaria elimination in the Americas.

SECOND PART

OBJECTIVES

Regional Guidance on WHO policy brief

- Ensure continuity in the use of primaquine for P. vivax radical cure in countries of the Americas and the transition based on the risk-benefit assessment owing to the current unavailability of a point of care diagnostic test for G6PD status;

- Support countries in introduction and scale up of G6PD deficiency diagnosis and good case management practices to prevent severe consequences in malaria patients due to haemolysis.

THIRD PART

STRATEGY

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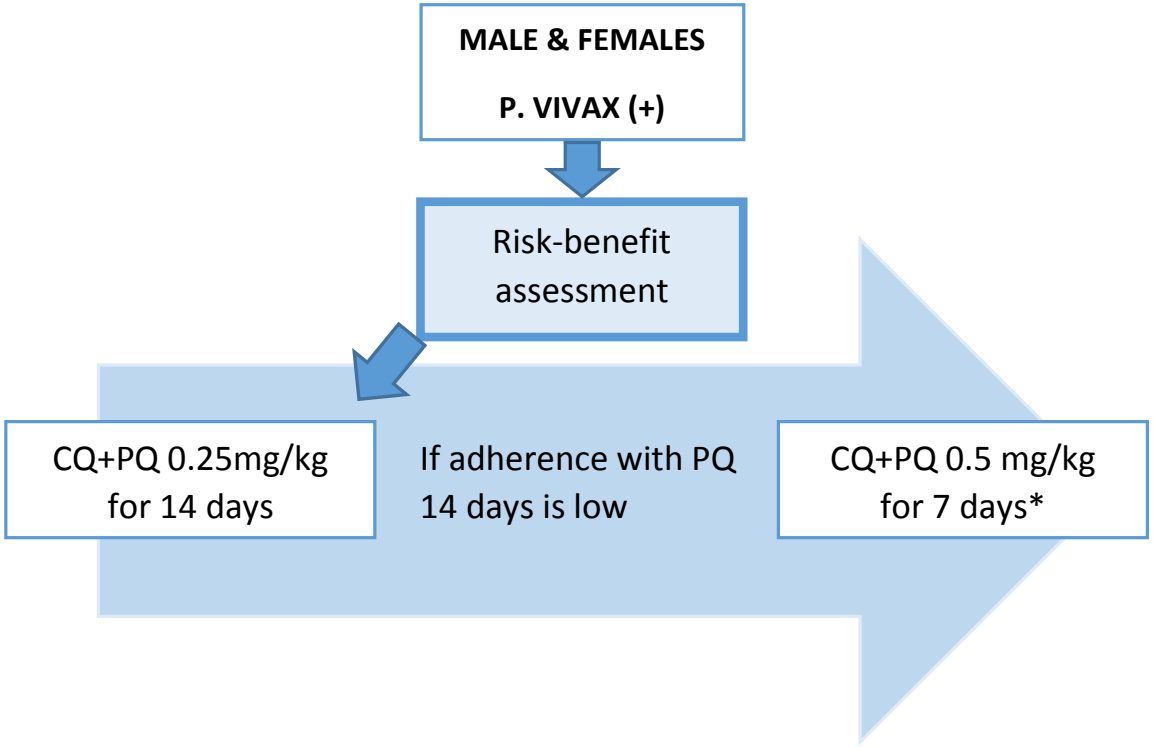
Main areas to be strength

Wherever primaquine is administered with or without G6PD testing the national health authorities should implement the following practices:

- Patients counselling
- Health service capacity
- Pharmacovigilance

A. Treatment choices when the G6PD deficiency status of the patient is unknown (G6PDd test not available)

1. Countries or areas with low G6PD deficiency prevalence



* if observed treatment with basic response is available

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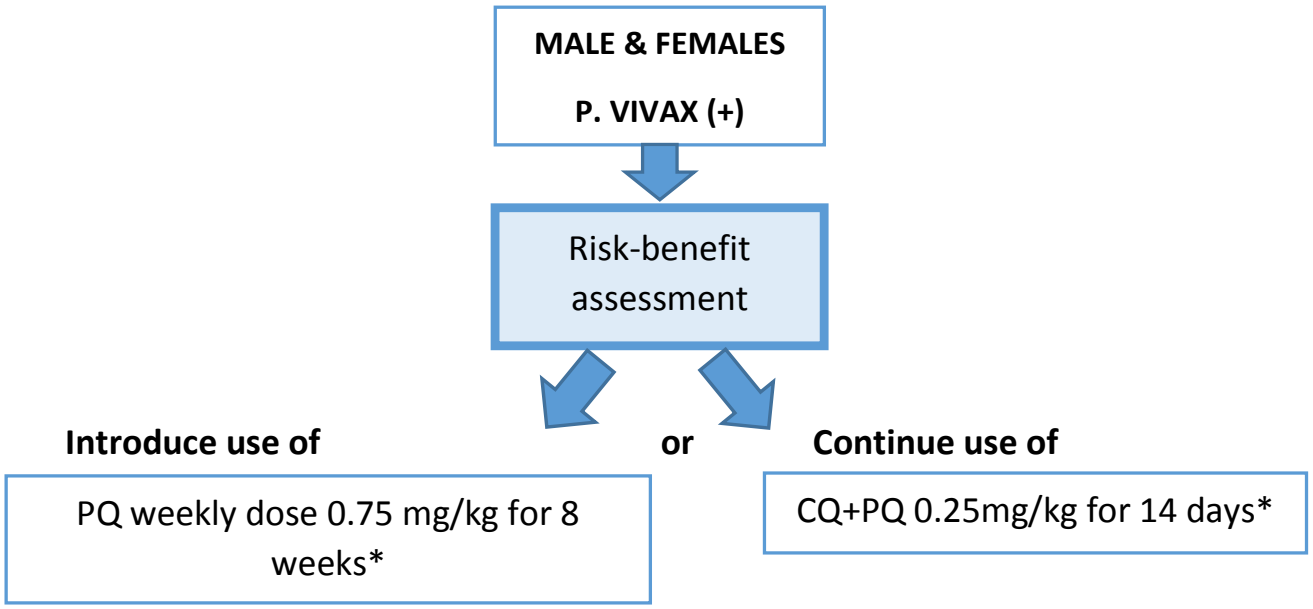
A. Treatment choices when the G6PD deficiency status of the patient is unknown (G6PDd test not available)

2. Countries or areas with high G6PD deficiency prevalence



* With regular supervision by health professionals.

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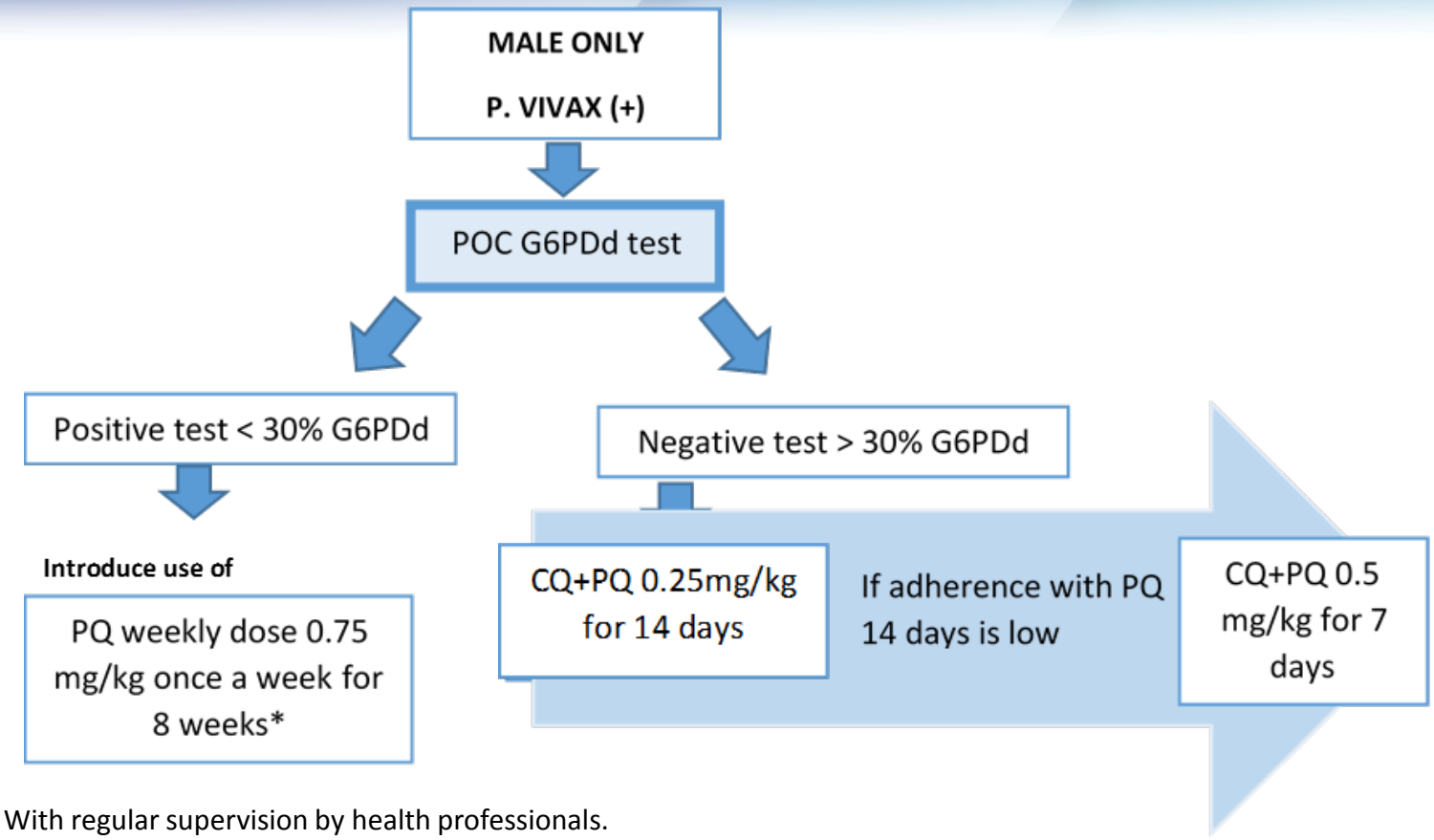
B1.Treatment choices when the G6PD deficiency status of the patient is known (G6PDd test available).



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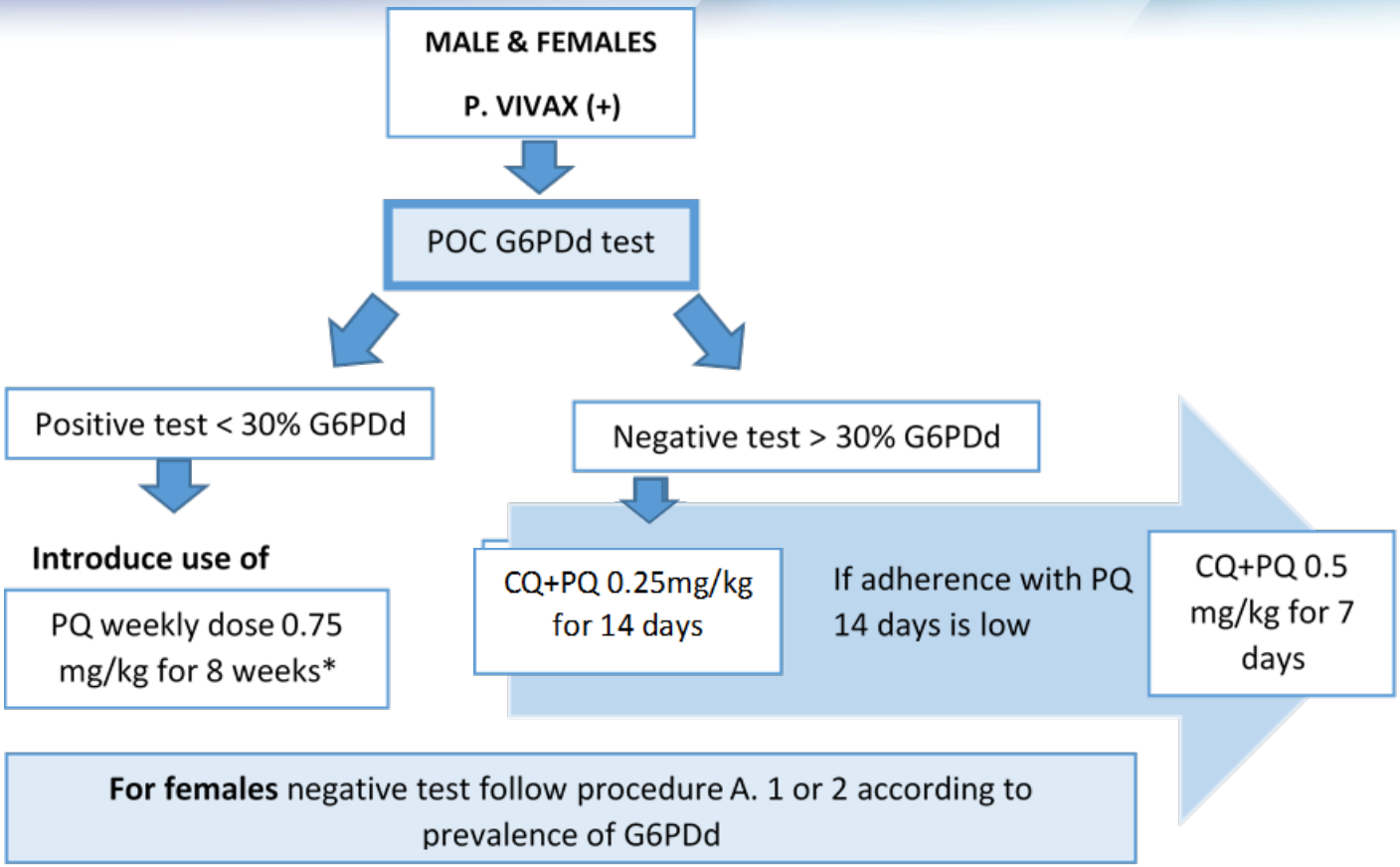
B2. Treatment choices when the G6PD deficiency status of the patient is known (G6PDd test available)



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QUESTIONS FOR TAG MEMBERS

KEY POINTS FOR DISCUSSIONS

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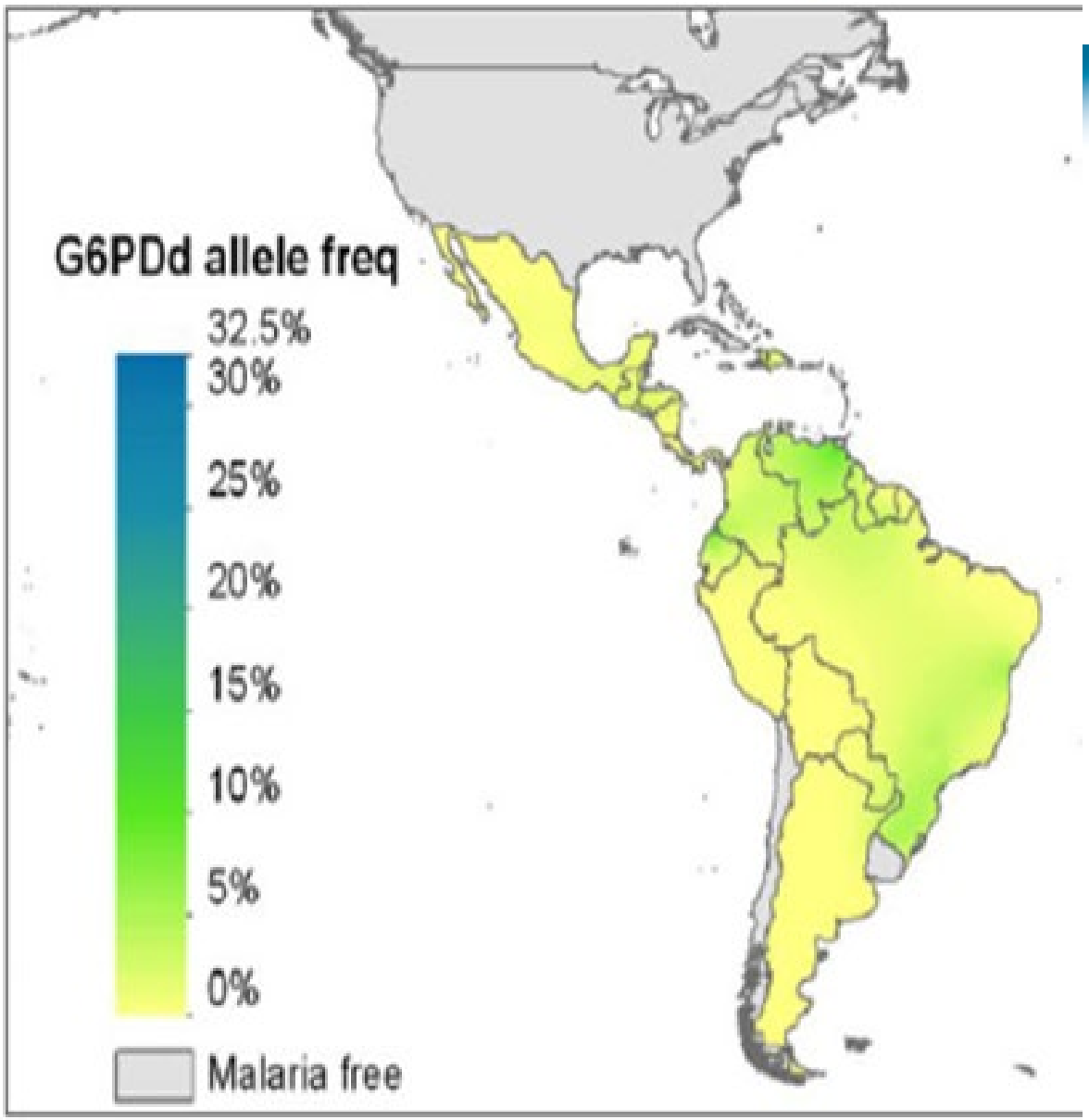
Questions

- Comments on the strategy and flowchart
- Do we need to support G6PD deficiency prevalence and variants studies in the Region?
- Operational issues behind implementation of G6PDd testing (procurement, quality control, training…)

FIGURE 1

Prevalence of G6PD deficiency



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