

## Summary of key discussion points—Roadblocks to the deployment of primaquine

- **Evidence gaps.** The mechanism of gametocytocidal action of primaquine should be investigated in order to optimally measure its effect.
- Future trials should be standardised with consistent safety and efficacy endpoints and be conducted in a range of transmission settings.
  - Gametocyte density measures should be calibrated with standardised membrane feeding to investigate the reduction in infectivity post intervention.
  - A standardised and functional measurement of primaquine-associated haemolysis needs definition.
- Studies should be designed with a target product profile for an ideal transmission-blocking drug in mind. This must include safety in G6PD deficient individuals.
- There is insufficient data on population (and sub-population) prevalences of G6PD deficiency in countries where primaquine could potentially be deployed.
  - G6PD deficiency diagnostics need agreed standards with relevance to primaquine - associated haemolysis and should be usable in the community/ field setting.
- The target population and method of distribution for maximal effect need to be determined; is there a role for primaquine in treatment of clinical cases versus MDA in asymptomatic infected individuals, depending on the transmission intensity?
- Deciding when and where to deploy MDA is very important. Previous WHO MDA guidelines were for reducing prevalence from high to low levels. However, it was felt that a more appropriate use of MDA would be to reduce low prevalence to zero.
- Primaquine-based MDA or an equivalent community intervention should be used in conjunction with vector control measures (LLINs and IRS).

## Policy/ implementation challenges

- Important ethical issues arise with the administration of a drug with benefit primarily to the population rather than to the individual and these have implications for study design. Ultimately, an acceptable level of risk to the individual must be agreed upon.
- The interactions of primaquine with co-administered ACTs, antiretrovirals and anti-tuberculosis medications should be explored.
- Stakeholders (ethical review boards, drug authorities, WHO) should be involved early to:
  - optimise the translation of study outcomes to effective deployment.
  - ensure long-term availability of quality-assured primaquine.
  - ensure that regulatory requirements are satisfied; currently, malaria transmission-blocking is not an authorised indication for primaquine.