AMAZON MALARIA INITIATIVE (AMI)/ RAVREDA

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GUIDELINES FOR THE TREATMENT OF MALARIA

Second edition

World Health Organization

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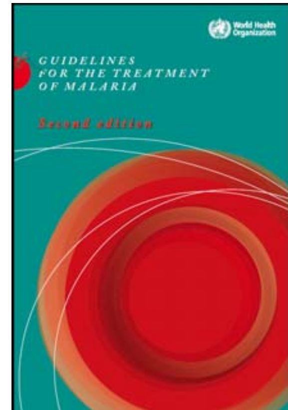
The *WHO Guidelines* *for the treatment of malaria (MTG)*...

...provide comprehensible, global and evidence-based guidelines for the formulation of policies and protocols for the treatment of malaria

- provide a framework for development of specific diagnosis and treatment protocols in countries
  - Taking in account national and local malaria drug resistance pattern and health services capacity
- It is not a clinical management manual for the treatment of malaria
- *2nd Edition (2010) – (release date 9 March 2010)*



www.who.int/malaria/docs/TreatmentGuidelines2010.pdf

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Contents and scope of the MTG

- Malaria diagnosis and treatment – policies and strategies from a **clinical** and a **public health** perspective
  - **What to use** – in diagnosis, curative/palliative treatment
  - **How and where to use**
    - Indications, contraindications and precautions
    - Best practices in clinical management
    - Strategies for the use of medicines

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The WHO Guidelines for the Treatment of Malaria...

...provides evidence based recommendations for the treatment of:

- uncomplicated malaria
- severe malaria

✓ in special groups (young children, pregnant women, HIV /AIDS)
✓ in travellers (from non-malaria endemic regions)
✓ in epidemics and complex emergency situations

Formulation of Recommendations for Malaria Treatment

- Based on evidence - on a consideration of the safety, efficacy, overall cost- benefit
  - from a clinical and a global public health perspective
  - Considering, in the case of a medicine, procedure or a strategy, the benefits against the
    - the risks,
    - burden of cost
    - the implications for the health system,
    - the feasibility of implementation

Current Recommendations including updates in the 2nd edition (2010)

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Malaria Diagnosis

- Prompt parasitological confirmation by microscopy or alternatively by RDTs is recommended in all patients suspected of malaria before treatment is started.
- Treatment solely on the basis of clinical suspicion should only be considered when a parasitological diagnosis is not accessible.

Treatment of Uncomplicated Falciparum Malaria

- Artemisinin-based combination therapies (ACTs) are the recommended treatments for uncomplicated falciparum malaria.

- The following ACTs are recommended:
  - Artemether + lumefantrine; artesunate + amodiaquine; artesunate + mefloquine; artesunate + sulfadoxine-pyrimethamine, and dihydroartemisinin + piperaquine .

- Second-line antimalarial treatment:
  - Alternative ACT known to be effective in the region;
  - Artesunate plus tetracycline or doxycycline or clindamycin. Any of these combinations to be given for 7 days; and
  - Quinine plus tetracycline or doxycycline or clindamycin. Any of these combinations should be given for 7 days.

Treatment of Uncomplicated *falciparum* malaria

- Artemisinin-based combination therapies should be used in preference to non-artemisinin based combination (sulfadoxine-pyrimethamine + amodiaquine).
- ACTs should include at least 3 days of treatment with an artemisinin derivative
- Dihydroartemisinin + piperaquine (DHA+PPQ) is an option for the treatment of uncomplicated *P. falciparum* malaria worldwide
- Single dose of primaquine (0.75mg/kg) used for its antigamecytocidal action in the treatment of falciparum malaria, especially in the pre-elimination and elimination programmes.

Treatment of severe malaria

- Severe malaria is a medical emergency. Full doses of parenteral antimalarial treatment should be started without delay with whichever effective antimalarial is first available.
- For adults, artesunate i.v. or i.m
  - Quinine remains an acceptable alternative.
- For children (especially in the malaria endemic areas of Africa) the following antimalarial medicines are recommended as there is insufficient evidence to recommend any of these antimalarial medicines over another:
  - artesunate i.v. or i.m.
  - quinine (i.v. infusion or divided i.m. injection)
  - artemether i.m.
- Give parenteral antimalarials for a minimum of 24hrs once started (irrespective of the patient's ability to tolerate oral medication earlier), and, thereafter, complete treatment by giving a complete course of:
  - an ACT
  - artesunate + clindamycin or doxycycline
  - quinine + clindamycin or doxycycline.

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Treatment of vivax malaria

- Chloroquine combined with primaquine is the treatment of choice for chloroquine-sensitive infections.
- In areas with chloroquine resistant *P. vivax,* ACTs (with partner medicines with long-half lives) is recommended for the treatment of *P. vivax* malaria
- At least a 14-day course of primaquine is required for the radical treatment (0.25 – 0.5mg/kg/day)
- In mild - moderate G6PD deficiency, primaquine 0.75 mg base/kg bw given once a week for 8 weeks. In severe cases, primaquine is contraindicated.

Special Groups

Pregnancy

- ***First trimester:***
  - Quinine + clindamycin
  - An ACT is indicated only if this is the only treatment immediately available, or if treatment with quinine + clindamycin fails or compliance issues with a 7-day treatment.
- ***Second and third trimesters:***
  - ACTs known to be effective in the country/region or artesunate + clindamycin or quinine + clindamycin

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Special Groups

Lactating women

- Lactating women should receive standard antimalarial treatment (including ACTs) except for dapsone, primaquine and tetracyclines.

Infants and young children

- ACTs with attention to accurate dosing and ensuring

Travellers returning to non-endemic countries:

- atovaquone-proguanil
- Artemether +lumefantrine
- dihydroartemisinin + piperaquine
- quinine + doxycycline or clindamycin.

Next Steps

- Wide dissemination
- Review and updates of national guidelines
- Updates of relevant treatment manuals and algorithms (e.g. IMCI, severe malaria)
- Begin the process of review of evidence for the preventive use of antimalarial medicines for inclusion in the next edition of the Guidelines

National treatment policy (current?)

					P.vivax	*ACT Adoption*
	lab-confirmed	treatment failure	severe malaria	pregnancy treatment	treatment	
Boliva	AS+MQ	QN+CL			CQ+PQ	2001
Brazil	AL		AS;AM;QN	QN; (AS+AQ -2nd &3rd trimester); CQ for vivax	CQ+PQ(7d)	2006
Colombia	AS+MQ	QN(3d)+CL(5d)	QN(7d)	QN; (AS+AQ -2nd &3rd trimester);	CQ+PQ	2004
Ecuador	AS+SP; AL	QN+T,D,CL			CQ+PQ	2004
Guyana	AL	QN+T			CQ+PQ	2004
Peru (Amazon area)	AS+MQ (one province); AS+SP				CQ+PQ	2001
Suriname	AL	QN(7d)			CQ+PQ	2004

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