

# WHO update of malaria terminology

August 2015, Geneva, Switzerland

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## Introduction

The Malaria Policy Advisory Committee, at its last meeting in March 2015,<sup>1</sup> welcomed the initiative of the WHO Global Malaria Programme (GMP) Secretariat to update the WHO publication *Terminology of malaria and of malaria eradication*, which dates back to 1963 (1). Several WHO publications over the past 10 years have included a glossary of terms on multiple interventions related to malaria prevention, control, elimination and surveillance; however, the terminology of malaria has not been comprehensively reviewed over the past 50 years.

## 1 Process for updating malaria terminology

### 2.1 Desk review

The review focused on terms having programmatic relevance, related to malaria elimination and eradication, and having conflicting definitions and use. The process started with a desk review carried out between April and May 2015, covering the steps outlined below:

- a. Compilation of all WHO terms and definitions used in WHO malaria publications since 1995, in addition to those contained in the glossary of *Terminology of malaria and of malaria eradication* (1) – 16 documents included.
- b. Compilation of similar or identical terms and definitions used by other WHO departments; for example, “preventive chemotherapy for neglected tropical diseases (NTDs)” – 16 documents included.
- c. Systematic research of scientific papers with definitions or glossary published over the past 10 years to identify recurrent terms that are the same or similar but are given different meanings, as well as new terms that are given similar meanings – 15 documents included.

Based on the findings of the desk review, a total of 292 terms were identified and draft definitions proposed. Terms were divided into four groups related to elimination (50), vector control (69), surveillance (85) and diagnosis and treatment (88), with many terms relevant to both surveillance and elimination.

### 2.2 Drafting committee review – Phase I

Based on the results of the desk review, a draft definition was proposed for each term. When relevant, an explanatory note was added to the definition. All 292 terms and their definitions were submitted to the members of the WHO Drafting Committee on Malaria Terminology.

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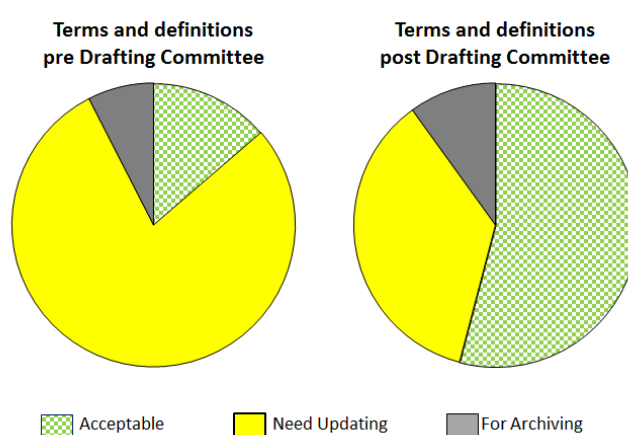
1. <http://www.who.int/malaria/mpac/mpac-march2015-meeting-summary.pdf>

The committee members were Prof Andrei Beljaev, Prof Graham Brown, Dr Kamini Mendis, Dr José Najera, Dr Trenton Ruebush, Dr Rick Steketee (Chairperson) and Graham White. The committee received all draft terms by email and was asked to classify them into three groups:

1. Terms that were and are still relevant and properly described – definition to be reviewed for updating the language, but generally considered “good as they stand”.
2. Terms that have been used in the past and have value for historical purposes, but are no longer in current use.
3. Terms that are relevant today but may have taken on a new meaning and different use – terms need to be reviewed and possibly redefined, or at least updated so that the language of the definition reflects their current use.

After the initial review, the committee was convened for a consultation in Geneva on 2–3 June 2015, to refine all definitions. Members worked in pairs on all terms, focusing on each of the four technical areas, and results were then presented in plenary for review by the whole committee. The work was further refined after the meeting, through multiple email exchanges among committee members. A concerted effort was made to simplify definitions as much as possible, and, as a result, the recommended definitions tended to be short and the explanatory note was used to provide qualifying information.

Before the June meeting, of the 292 terms, 40 were identified as being properly described (Group 1), 22 were proposed for archiving (Group 2) and 230 were identified as being in need of updating (Group 3). Following extensive work on the definitions, the drafting committee considered 153 terms as being properly described, 38 were proposed for archiving (Group 2), and 101 terms were identified as requiring additional inputs (see figure below).



## 2.3 External survey

A series of 101 terms with draft definitions was identified as requiring additional inputs and external review. To collect expert feedback in a systematic way, WHO developed an online survey and issued a weblink with 47 passcodes (“tokens”) that were sent to 30 identified institutions or groups. These included the Asia Pacific Malaria Elimination Network (APMEN); the Foundation for Innovative New Diagnostics (FIND); Gates Foundation Malaria Program; Innovative Vector Control (IVCC); the Malaria Elimination Group University of California, San Francisco (UCSF); Medicines for Malaria Venture (MMV); PATH Malaria Control and Elimination Partnership in Africa (MACEPA); the Roll Back Malaria (RBM) Case Management Working Group; the RBM Monitoring Evaluation Reference Group; the RBM Vector Control Working Group; the US Centers for Disease Control and Prevention (CDC); US President’s Malaria Initiative (PMI);

the Vector Control Advisory Group (VCAG); WHO/GMP; WHO/NTD; WHO Regional Malaria Advisers; WHO Technical Expert Group (TEG) on Antimalarial Drug Resistance and Containment; WHO TEG on Malaria Chemotherapy; WHO TEG on Surveillance, Monitoring and Evaluation; WHO TEG on Vector Control; WHO Collaborating Centre (CC) for Malaria; WHOCC for Surveillance of Antimalarial Drug Resistance; WHOCC pour l'Evaluation de nouveaux Insecticides destinés à la Lutte contre les Vecteurs; WHOCC for Ecology, Taxonomy and Control of Vectors of Malaria, Filariasis and Dengue; WHOCC for Malaria Diagnosis; WHOCC for Malaria Control, Elimination and Eradication; WHOCC for Clinical Management of Malaria; WHOCC in Geospatial Disease Modelling; WHOCC for Prevention and Control of Malaria; and the WHOCC on Early Warning Systems for Malaria and other Climate Sensitive Diseases.

Passcodes were dedicated to individual institutions or groups, and sent to the corresponding lead contacts (e.g. CEOs, chairs or co-chairs of working groups, directors and so on), who could designate additional technical resource persons from their institution or group to participate in the review by sharing the passcode. All inputs provided by the different reviewers of an institution or group were then recorded as a “single” response with a single token.

To facilitate review and inputs, the 101 terms were grouped into four categories:

- diagnosis and treatment (32 terms)
- elimination (28 terms)
- surveillance (21 terms)
- vector control (20 terms).

Each term had a draft definition and, where appropriate, an explanatory note. For each term, the reviewer was invited to recommend to: (1.) retain (“ok”), (2.) reject (“omit”), or (3.) amend (“modify”) the suggested definition and/or the commentary, providing a written alternative text.

The survey was carried out between 6 and 26 July 2015, and responses were obtained from 25/47 tokens by 20/30 institutions/groups. Seven reviewers provided feedback on all four survey categories, the rest commented on one, two or three individual categories. A total of 19 reviewers provided feedback on terms in the diagnosis and treatment category, 11 on elimination, 10 on surveillance and 11 on vector control.

A total of 1260 entries was received: 884 entries for “ok”, 75 entries for “omit” (=archiving), and 301 entries with recommendations to “modify”. Only five terms were marked as “ok” by all reviewers: causal prophylaxis, passive case detection, stable transmission, unstable transmission and gonotrophic dissociation.

## **2.4 Drafting committee review – Phase II**

All inputs were reviewed and compiled by the WHO/GMP Secretariat and the suggested modifications then submitted to the WHO drafting committee for review by email exchanges. The consolidated result of this work in the form of a glossary has now submitted to MPAC for final review, together with specific consideration on the term “malaria case”, which generated significant debate among the members of the drafting committee and external reviewers.

### 3 Requested action by MPAC

MPAC is asked to provide the following to GMP:

4. Advice on malaria case definition (see Annex 1).
5. Feedback on the glossary with proposed terms and definitions (see Annex 2).
6. Advice on the process for reviewing and incorporating new terms.
7. Mechanisms for dissemination and promoting uptake following MPAC review.

### 4 Acknowledgements

The valuable support provided by Ms Mar Velarde, ISGlobal/ Malaria Eradication Scientific Alliance (MESA), for the phase of desk review and preparations for the drafting committee meeting is gratefully acknowledged. The external survey was ably developed and managed by Mr Ryan Williams, WHO/GMP, following the indications of the drafting committee, and the compilation of all inputs received and analysis of the survey results was efficiently completed by Ms Silvia Schwarte, WHO/GMP. The excellent contributions of all members of the drafting committee are well recognised, in particular Prof Andrei Beljaev, Prof Graham Brown, Dr Kamini Mendis, Dr José Najera, Dr Trenton Ruebush, Dr Rick Steketee and Dr Graham White. The precision and careful attention to the tasks, and the capacity to provide timely and precious feedback, have been instrumental in the work being complete. The excellent inputs received from over 20 institutions or groups is greatly appreciated. Dr Rick Steketee, Chairperson of the WHO Drafting Committee on Malaria Terminology has provided guidance in the different phases of planning and implementation of the review process, and Dr Andrea Bosman has served as Secretariat of the WHO work to update malaria terminology. The work has been funded as part of the contribution from the Bill & Melinda Gates Foundation to WHO/GMP.

### Reference

- 1 WHO. Terminology of malaria and of malaria eradication. Geneva, World Health Organization (WHO). 1963  
([https://extranet.who.int/iris/restricted/bitstream/10665/39007/1/9241540141\\_eng.pdf](https://extranet.who.int/iris/restricted/bitstream/10665/39007/1/9241540141_eng.pdf) accessed 24 August 2015).