

The MAP database PR inclusion criteria

Many factors can introduce bias when estimating the malaria PR of human populations. These include, amongst others, the age-range of the subjects investigated, short- and long-term temporal variations in transmission levels (*i.e.* seasonality, inter-annual variability and secularity) [1-4], heterogeneity of the host, vector and parasite populations [5, 6], and the immunity status of the sampled population [7-9]. More generically, the precision of the estimate depends both on the size of the sample and the underlying true prevalence of malaria [10]. A series of *a priori* inclusion criteria were defined and used during data collection to try to control for this bias. These criteria are classified as either strict (surveys were excluded if they did not comply) or preferred (did not necessarily exclude surveys but guided selection to the best data available).

Strict criteria

Time of survey	The last 20 years were considered a balanced, yet admittedly arbitrary, period for PR data inclusion. All surveys conducted before 1 January 1985 were excluded. This cut-off point was informed by many reports of the changing patterns of malaria epidemiology coincidental with this period [11-28].
Sample size	A sample size of 50 was deemed an adequate minimum based on the inverse relationship observed between sample size and the standard error of prevalence estimates [10].
Sampling method	Surveys needed to be community based and conducted in the whole community or in a random sample of the entire population. Surveys of symptomatic individuals or those focused on sub-groups of the population (<i>e.g.</i> pregnant women or workers) were excluded as the former are likely to overestimate the PR and the latter are not necessarily a good representation of the entire community.
Data from intervention studies	Data from surveys conducted as part of intervention trials were included only as those representing pre-intervention baseline characterisations. Exceptions were made by using control groups only when no

placebo or non-modifying placebos were given.

Spatial and time duplicates (*i.e.* same communities with two different PR estimates in time) PR data from locations surveyed within a time space of 36 months were collapsed into a single estimate. If more than one PR estimate were available for a single site expanding in time beyond the 36 month window, the most recent data were kept, unless major advantages in the quality of the older data were apparent (*e.g.* significantly larger [$>10\%$] sample size, a more appropriate age-range, or more cross-sectional observations were conducted).

Preferred criteria

Numerator/denominator The numerator and denominator needed to be specified clearly or derived unambiguously from the data presented. Exceptions were made only where the sample size could still be assumed safely to be above 50 (*e.g.* the source stated clearly that the whole or most of the community was sampled or that the sample size was of a number higher than 50).

Age groups Surveys undertaken in children <14 years of age were preferred in Africa and 'all ages' elsewhere.

Spatial coverage Since data needed to be geo-positioned with accuracy, sites or communities representing spatial points were preferred.

Examination method Given its ubiquity as a means for malaria diagnosis, the preferred parasite detection method was microscopy, either light or fluorescent. RDT were considered when no alternative data from blood smears were available. PCR and IFAT were excluded given differing sensitivities and inter-comparability issues.

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