New global estimates of malaria deaths

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India figures prominently as the largest contributor of malaria deaths outside Africa in new global estimates by Christopher Murray and colleagues.[1] However, India is often the greatest source of uncertainty in such estimates because of its sheer scale. With 85% of the 1.2 billion population at risk of malaria from both major parasite species, across varied transmission settings, and via six primary vectors, representative empirical data are hard to produce.

If Murray and colleagues' estimates are accurate, the historic decrease in malaria deaths in India since 1980 was indeed driven by general development, improvements in the health system, and better case management rather than the reduction in malaria transmission, since cases of falciparum malaria increased between 1980 and 2000 in the context of stable reporting (table). However, to conclude that socioeconomic change and improved quality of care led to the apparent decline in fatal malaria would assume (1) that *Plasmodium vivax*, whose reported cases substantially decreased during the same period, contributes little mortality in India—a view under increasing attack in the face of recent evidence,[2] and (2) that resistance to both first-line and second-line antimalarial drugs, which increased between 1978 and 2007,[3] is not a major driver of malaria mortality, contrary to the results of other studies and Murray and colleagues' own findings.

Finally, the country perspective is frequently missing in global estimates of disease. Although the results can be important in setting international priorities and in affecting donor agencies, they cannot improve national malaria control programmes unless they can provide disaggregated, frequently updated estimates.[4] Thus, the measurement of malaria and all-cause mortality must be improved through routine systems.

References

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Table

Trends in malaria from routine surveillance in India, 1980–2010

	Population[*]	BSE[*]	ABER	Malaria[*]	Falciparum[*] malaria	API	AFI
1980	687322	67170	9.8%	2898	588 (20.3%)	4.2	0.9
1990	849515	74420	8.8%	2019	752 (37.3%)	2.4	0.9
2000	1015900	86790	8.5%	2032	1047 (51.5%)	2.0	1.0
2002	1048600	91618	8.7%	1842	897 (48.7%)	1.8	0.9
2010	1170900	108679	9.3%	1600	834 (52.1%)	1.4	0.7

Population data from World Bank. BSE=blood smears examined. ABER=annual blood examination rate in the population. API=annual parasite incidence per 1000. AFI=annual falciparum incidence per 1000.

[*]
Thousands.