

**ADDITIONAL FILE 2**

**Table 1** Distributions and parameter values used for the probabilistic sensitivity analysis.

Parameters	Distribution*	Notes
EFFECTIVENESS		
Prevalence ratio for the intervention (log scale)	<i>Truncated Normal</i> (ln(0.81); 0.072)	1
DISABILITY-ADJUSTED LIFE YEARS		
Disability weight for infectious disease: mild	<i>Triangular</i> (min=0.002; max=0.011)	2
Disability weight for infectious disease: moderate	<i>Triangular</i> (min=0.033; max=0.081)	2
Disability weight for infectious disease: severe	<i>Triangular</i> (min=0.139; max=0.298)	2
Disability weight for anemia: mild	<i>Triangular</i> (min=0.002; max=0.011)	2
Disability weight for anemia: moderate	<i>Triangular</i> (min=0.038; max=0.086)	2
Disability weight for anemia: severe	<i>Triangular</i> (min=0.112; max=0.228)	2
Disability weight for cognitive impairments	<i>Triangular</i> (min=0.141; max=0.314)	2
Duration of a malaria episode (days)	<i>Uniform</i> (min=14, max=28)	3
Duration of anemia (days)	<i>Uniform</i> (min=21, max=35)	4
TREATMENT-SEEKING BEHAVIORS		
Proportion seeking care at/through health facility (P <sub>HF</sub> ), community-health workers (P <sub>TSB1</sub> ), pharmacy/store (P <sub>TSB2</sub> ), traditional healers (P <sub>TSB3</sub> ), and not seeking treatment (P <sub>TSB4</sub> ).	$PS_{HF} = \text{Triangular (min=54\%; max=81\%)}$ $PS_{TSBi} = P_{TSBi} + [P_{TSBi} * (P_{HF} - PS_{HF}) / (1 - P_{HF})]$	5
COSTS SAVINGS (PROVIDER)		
Proportion treated as out-patient (P <sub>Out</sub> )	<i>Triangular</i> (min=72%; max=95%)	6
Proportion diagnosed using microscopy (P <sub>Mic</sub> )	<i>Triangular</i> (min=33%; max=55%)	7
Costs of diagnostic with microscopy (CD <sub>Mic</sub> )	<i>Triangular</i> (min=0.45\$; max=0.75\$)	7
Cost of diagnostic with RDT (CD <sub>RDT</sub> )	<i>Triangular</i> (min=0.52\$; max=4.94\$)	8
Outpatient's cost of treatment (CT <sub>Out</sub> )	<i>Triangular</i> (min=1.26\$; max=5.22\$)	9
Inpatient's cost of diagnostic and treatment (CTD <sub>In</sub> )	<i>Triangular</i> (min=58.38\$; max=90.51\$)	10
COSTS SAVINGS (SOCIETY)		
Fee for traditional healer	<i>Triangular</i> (min=0.21; max=5.19)	11
Cost of artemether-lumefantrine at pharmacy/store	<i>Triangular</i> (min=0.51; max=1.03)	12
Transportation costs to health facility/healer	<i>Triangular</i> (min=0.20; max=0.42)	13
Number of days lost to malaria episode (N) and to care for children aged 10-14 years of age (N <sub>10-14</sub> )	$N = \text{Triangular (min=2; max=5)}$ $N_{10-14} = N * \text{Uniform (min=20\%; max=30\%)}$	14
Proportion of earnings lost to anemia	<i>Uniform</i> (min=2.5%; max=7.4%)	15
Proportion of earnings lost to neurological sequelae	<i>Triangular</i> (min=10%; max=20%)	16
Funeral costs	<i>Triangular</i> (min=30.53\$; max=50.26\$)	17

Note: All prices are in 2012 US dollars.

\*The modes of the triangular distributions correspond to the values used to calculate the cost-effectiveness ratios.

## Notes:

- 1- Adapted from Maheu-Giroux and Castro [1]. Because it is biologically impossible for larviciding to cause an increase in malaria incidence, the normal distribution was truncated for values above the null.
- 2- The 95% confidence intervals of the disability weights reported in the 2010 GBD study were used as minimum and maximum values of the triangular distribution [2].
- 3- For the duration of malaria episodes, the same distribution as the one reported in the GBD 2010 study was used [3].
- 4- The post-malaria recovery period reported in the literature [4-6] was used and  $\pm 1$  week was added to that quantity.
- 5- Lowest and highest age-specific proportions of individual attending health facilities in the UMCP data. The other 4 treatment-seeking behaviors were rescaled such that the sum of these proportions would still be equal to 1.  $PS_{TSBi}$  refers to the re-sampled proportion whereas  $P_{TSBi}$  refers to the values described in Table 5.
- 6- Minimum for severe malaria is reported in Reyburn *et al.* [7]. An upper bound of 95% for this distribution was assumed.
- 7- Minimum and maximum values of the triangular distributions were calculated as  $\pm 25\%$  the mode of the distribution.
- 8- Minimum is obtained by considering only the price of test (excluding labor), as reported by Harchut *et al.* [8]. Maximum value is taken from White *et al.* [9].
- 9- Minimum value is the negotiated WHO/Novartis price, excluding adjustments for wastage and transport. Maximum value corresponds to the price reported in the AFRO essential drug price indicator.
- 10- Minimum and maximum values as reported by Lubell *et al.* [10].
- 11- Minimum is reported by Somi *et al.* [11] and maximum by Sicuri *et al.* [12].
- 12- Minimum and maximum values correspond to the interquartile range reported by Tougher *et al.* [13].
- 13- Minimum and maximum values correspond to the 95% confidence interval reported by Yukich *et al.* [14].
- 14- Values for this triangular distribution are taken from the review of Chima *et al.* [15]. For children aged 10-14 years of aged, it was assumed that it would correspond to 20-30% of an adult illness time.
- 15- Minimum value taken by reducing by 50% the estimate of 5% loss in earning. Maximum value corresponds to a situation where 20% of workers in Dar es Salaam are involved in manual work where lost in earnings is estimated at 17% [16].
- 16- A uniform distribution was used to acknowledge the fact that prior information on this parameter is uncertain. The minimum and maximum values correspond to the authors' evaluation of a plausible conservative range.
- 17- Minimum value reported by Ngalula *et al.* [17] and maximum value by Dercon *et al.* [18].

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