**Extended data**

**Table E1. Cost estimations and economic data used in calculations**

|  | AFG | BAN | BHU | CAM | CHN | DPRK | IND | INDO | LAO | MYS | MYA |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| World Bank income group | LIC | LMIC | LMIC | LIC | UMIC | LIC | LMIC | LMIC | LMIC | UMIC | LMIC |
| Cost of pp protected  by IRS | 3.45  (2.59-4.31) | 2.31 (1.73-2.89) | 3.45 (2.59-4.31) | 4.24 (3.18-5.30) | 2.31 (1.73-2.89) | 4.37 (3.28-5.46) | 2.31 (1.73-2.89) | 3.88 (2.91-4.86) | 4.24 (3.18-5.30) | 4.27 (3.28-5.46) | 4.24 (3.18-5.30 |
| Cost of pp protected  by LLINs | 4.12 (3.09-5.15) | 1.83 (1.37-2.29) | 2.01 (1.51-2.51) | 2.51 (1.88-3.13) | 2.53 (1.90-3.17) | 6.87 (5.15-8.59) | 2.53 (1.90-3.17) | 2.50 (1.88-3.13) | 2.51 (1.88-3.13) | 6.87 (5.15-8.59) | 3.17 (2.37-3.96) |
| Cost of *falciparum* antimalarial (outpatient) | 0.93 (0.69-1.16) | 0.78 (0,59-0.98) | 0.93 (0.69-1.16) | 2.20 (1.65-2.75) | 2.20 (1.65-2.75) | 0.93 (0.69-1.16) | 0.93 (0.69-1.16) | 2.20 (1.65-2.75) | 2.20 (1.65-2.75) | 0.93 (0.69-1.16) | 2.20 (1.65-2.75) |
| Cost of treatment as outpatient | 1.78 (1.34 (2.23) | 1.16 (0.87-1.45) | 3.93 (2.95-4.91) | 1.82 (1.37-2.28) | 4.18 (3.14-5.23) | 1.41 (1.06-1.76) | 2.51 (1.88-3.14) | 13.43 (10.07-16.79) | 2.07 (1.55-2.59) | 15.30 (11.48-19.13) | 1.30 (0.98-1.63) |
| Cost of *vivax* antimalarial | 0.29 (0,22-0.36) | 0.29 (0,22-0.36) | 0.29 (0,22-0.36) | 0.54 (0.41-0.68) | 0.29 (0,22-0.36) | 0.29 (0,22-0.36) | 0.29 (0,22-0.36) | 0.54 (0.41-0.68) | 0.29 (0,22-0.36) | 0.29 (0,22-0.36) | 0.29 (0,22-0.36) |
| Cost of G6PD testing | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) |
| Cost of antimalarial (inpatient) | 14.46 (10.85-18.08) | 25.89 (19.42-32.36) | 25.89 (19.42-32.36) | 14.46 (10.85-18.08) | 14.46 (10.85-18.08) | 14.46 (10.85-18.08) | 25.89 (19.42-32.36) | 25.89 (19.42-32.36) | 14.46 (10.85-18.08) | 14.46 (10.85-18.08) | 25.89 (19.42-32.36) |
| Cost of treatment as inpatient | 26.79 (20.09-33.48) | 22.88 (17.16-28.60) | 106.32 (79.74-132.89) | 38.33 (29.12-48.54) | 102.63 (76.97-128.29) | 26.40 (19.80-33.00) | 57.97 (43.48-72.46) | 159.6 (119.70-199.50) | 42.52 (31.89-53.14) | 593.62 (445.21-742.02) | 22.22 (16.67-27.78) |
| Cost of RDT | 1.20 (0.90-150) | 1.20 (0.90-150) | 1.20 (0.90-150) | 1.08 (0.81-1.35) | 1.20 (0.90-150) | 1.20 (0.90-150) | 1.69 (1.27-2.22) | 0.40 (0.30-0.50) | 1.07 (0.80-1.33) | 3.88 (2.91-4.86) | 0.40 (0.30-0.50) |
| Cost of slide | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) |
| Cost of surveillance pp | 0.36 (0.27-0.45) | 0 | 0.36 (0.27-0.45) | 0.44 (0.33-0.55) | 0.12 (0.09-0.15) | 0.36 (0.27-0.45) | 0.36 (0.27-0.45) | 0.23 (0.17-0.29) | 1.03 (0.77-1.28) | 0.36 (0.27-0.45) | 0.36 (0.27-0.45) |
| Cost of training pp | 0.08 (0.06-0.10) | 0 | 0,25 (0.19-0.32) | 0.15 (0.11-0.19) | 0.02 (0,02-0.03) | 0.02 (0,02-0.03) | 0.01 (0.01-0.02) | 0.03 (0.02-0.04) | 0.02 (0,02-0.03) | 0.02 (0,02-0.03) | 0.02 (0,02-0.03) |
| Cost of IEC pp | 0.06 (0.05-0.08) | 0.06 (0.05-0.08) | 0.06 (0.05-0.08) | 0.1 (0.07-0.12) | 0.06 (0.05-0.08) | 0.06 (0.05-0.08) | 0 | 0.04 (0.03-0.05) | 0.28 (0.21-0.35) | 0.06 (0.05-0.08) | 0.06 (0.05-0.08) |
| OOP expenditures | 25.26 (18.95-31.58) | 15.04 (11.28-18.80) | 25.26 (18.95-31.58) | 21.84 (16.38-27.30) | 21.84 (16.38-27.30) | 21.84 (16.38-27.30) | 21.84 (16.38-27.30) | 36.36 (27.27-45.45) | 21.84 (16.38-27.30) | 21.84 (16.38-27.30) | 21.84 (16.38-27.30) |
| Artesunate injection | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) |
| Cost of new *vivax* treatment | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) |
| Cost of new *falciparum* treatment | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) |
| Cost of new LLIN | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) |
| Cost of MDA pp | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) |
| Cost per CHW | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) |
| GDP/GNI per capita (USD) | 594.32 | 1,211.7 | 2,656 | 1,158.69 | 8,027.68 | 583 | 1598.26 | 3,347 | 1818.44 | 9768.33 | 1161.49 |
| GDP per capita per day (USD) | 2.29 | 4.64 | 10.22 | 4.45 | 30.87 | 2.24 | 6.15 | 12.87 | 6.99 | 37.57 | 4.47 |
| Coefficient for VLY calculation | 2.8 | 2.8 | 2.8 | 2.2 | 2.2 | 2.8 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| Discount rate (%) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| **Mortality** |  |  |  |  |  |  |  |  |  |  |  |
| Life expectancy at 40 (years) | 31.01 | 36.79 | 35.39 | 33.66 | 37.53 | 34.16 | 34.01 | 33.55 | 32.80 | 36.50 | 32.86 |
| Length of OP malaria case (days) | 3.81 | 4 | 4.82 | 4.82 | 4.85 | 4.82 | 4.82 | 9.3 | 4.82 | 4.82 | 4.82 |
| Duration of illness IP (days) | 8.75 | 7.5 | 8.75 | 8.75 | 8.75 | 8.75 | 8.75 | 9.3 | 8.75 | 8.75 | 8.75 |
| Length of IP malaria hospitalization | 8.75 | 7.5 | 5.00 | 5.00 | 5.00 | 5.00 |  | 3.65 | 5.00 | 5.00 | 5.00 |

|  | NEP | PAK | PHL | PNG | ROK | LKA | SOLS | TLS | THA | VAN | VIET |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| World Ba  nk income group | LIC | LMIC | LMIC | LMIC | HIC | LMIC | LMIC | LMIC | UMIC | LMIC | LMIC |
| Cost of pp protected  by IRS | 2.31 (1.73-2.89) | 3.45 (2.59-4.31) | 1.17 (0.88-1.46) | 0 | 4.37 (3.28-5.46) | 4.37 (3.28-5.46) | 1.13 (0.85-1.42) | 4.37 (3.28-5.46) | 1.22 (0.92-1.53) | 10.11 (7.58-12.64) | 1.17 (0.88-1.47) |
| Cost of pp protected  by LLINs | 2.53 (1.90-3.17) | 4.12 (3.09-5.15) | 1.14 (0.86-1.43) | 3.05 (2.29-3.81) | 6.87 (5.15-8.59) | 6.87 (5.15-8.59) | 2.75 (2.06-3.44) | 4.05 (3.04-5.06) | 4.05 (3.04-5.06) | 4.23 (3.17-5.29) | 2.51 (1.88-3.13) |
| Cost of *falciparum* antimalarial (outpatient) | 0.93 (0.69-1.16) | 0.93 (0.69-1.16) | 0.93 (0.69-1.16) | 0.93 (0.69-1.16) | 0.93 (0.69-1.16) | 0.93 (0.69-1.16) | 0.93 (0.69-1.16) | 0.93 (0.69-1.16) | 2.20 (1.65-2.75) | 0.93 (0.69-1.16) | 2.20 (1.65-2.75) |
| Cost of treatment as outpatient | 1.08 (0.81-1.35) | 1.96 (1.47-2.45) | 7.07 (5.30-8.84) | 2.92 (2.19-3.65) | 32.63 (24.47-40.79) | 14.41 (10.81-18.01) | 3.07 (2.30-3.84) | 1.40 (1.05-1.75) | 8.15 (6.11-10.19) | 5.81 (4.36-7.26) | 2.43 (1.82-3.04) |
| Cost of *vivax* antimalarial | 0.29 (0,22-0.36) | 0.29 (0,22-0.36) | 0.29 (0,22-0.36) | 1.16 (0.87-1.44) | 0.29 (0,22-0.36) | 0.29 (0,22-0.36) | 1.16 (0.87-1.44) | 0.29 (0,22-0.36) | 0.29 (0,22-0.36) | 1.16 (0.87-1.44) | 0.29 (0,22-0.36) |
| Cost of G6PD testing | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) | 7.00 (4.14-9.81) |
| Cost of antimalarial (inpatient) | 14.46 (10.85-18.08) | 14.46 (10.85-18.08) | 18.28 (13.71-22.85) | 7.19 (5.39-8.99) | 14.46 (10.85-18.08) | 14.46 (10.85-18.08) | 14.46 (10.85-18.08) | 14.46 (10.85-18.08) | 25.89 (19.42-32.36) | 25.89 (19.42-32.36) | 14.46 (10.85-18.08) |
| Cost of treatment as inpatient | 18.10 (13.57-22.62) | 42.19 (31.64-52.73) | 208.29 (156.21-260.36) | 293.48 (220.11-366.85) | 1572.73 (1179.5-1965.91) | 24.49 (18.37-30.61) | 69.41 (52.06-86.76) | 22.17 (16.62-27.71) | 198.00 (148.50-247.50) | 152.46 (114.35-190.58) | 152.46 (114.35-190.58) |
| Cost of RDT | 1.20 (0.90-1.50) | 1.20 (0.90-1.50) | 3.60 (2.70-4.50) | 0.67 (0.50-0.84) | 1.20 (0.90-1.50) | 1.20 (0.90-1.50) | 0.85 (0.64-1.06) | 1.20 (0.90-1.50) | 1.20 (0.90-1.50) | 0.78 (0.59-0.98) | 1.20 (0.90-1.50) |
| Cost of slide | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) | 0.86 (0.65-1.08) |
| Cost of surveillance pp | 0.02 (0.01-0.02) | 0.36 (0.27-0.45) | 0.03 (0.02-0.04) | 0.36 (0.27-0.45) | 0.36 (0.27-0.45) | 0.80 (0.60-1.0) | 1.71 (1.28-2.14) | 0.36 (0.27-0.45) | 0.36 (0.27-0.45) | 0.53 (0.4-0.66) | 0.36 (0.27-0.45) |
| Cost of training pp | 0.01 (0.01-0.02) | 0.02 (0,02-0.03) | 0 | 0.02 (0,02-0.03) | 0.02 (0,02-0.03) | 0.01 (0.01-0.01) | 0.02 (0,02-0.03) | 0.02 (0,02-0.03) | 0.02 (0,02-0.03) | 0.95 (0.71-1.19) | 0.02 (0,02-0.03) |
| Cost of IEC pp | 0.01 (0.01-0.02) | 0.06 (0.05-0.08) | 0.06 (0.05-0.08) | 0.06 (0.05-0.08) | 0.06 (0.05-0.08) | 0 | 1.03 (0.77-1.29) | 0.06 (0.05-0.08) | 0.06 (0.05-0.08) | 0.07 (0.06-0.09) | 0.06 (0.05-0.08) |
| OOP expenditures | 6.79 (5.10-8.49) | 14.85 (11.13-18.56) | 21.84 (16.38-27.30) | 9.08 (6.81-11.35) | 21.84 (16.38-27.30) | 23.28 917.46-29.10) | 21.84 (16.38-27.30) | 21.84 (16.38-27.30) | 21.84 (16.38-27.30) | 21.84 (16.38-27.30) | 21.84 (16.38-27.30) |
| Artesunate injection | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) | 11.57 (8.68-14.46) |
| Cost of new *vivax* treatment | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) | 0.50 (0.38-0.63) |
| Cost of new *falciparum* treatment | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) | 2.50 (1.88-3.13) |
| Cost of new LLIN | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) | 6.0 (4.50-7.50) |
| Cost of MDA pp | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) | 13.00 (8.00-17.00) |
| Cost per CHW | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) | 1726 (966-2486) |
| GDP per capita (USD) | 743.32 | 1434.70 | 2904.20 | 2,336.52 | 27221.52 | 3926.17 | 1934.86 | 1157.99 | 5814.77 | 2805.31 | 2111.14 |
| GDP per capita per day (US$) | 2.86 | 5.52 | 11.17 | 7.49 | 104.70 | 15.10 | 7.44 | 4.45 | 4.45 | 10.79 | 8.12 |
| Coefficient for VLY calculation | 2.8 | 2.8 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| Discount rate (%) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| **Mortality** |  |  |  |  |  |  |  |  |  |  |  |
| Life expectancy at 40 (years) | 34.01 | 34.53 | 32.51 | 29.36 | 42.52 | 37.41 | 33.41 | 33.90 | 37.94 | 35.18 | 39.35 |
| Length of OP malaria case (days) | 4.82 | 4.82 | 6.5 | 4.82 | 4.82 | 4.82 | 4.82 | 4.82 | 4.82 | 4.82 | 4.82 |
| Duration of illness IP (days) | 8.75 | 8.75 | 10 | 8.75 | 8.75 | 8.75 | 8.75 | 8.75 | 8.75 | 8.75 | 8.75 |
| Length of IP malaria hospitalization | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |