Supplemental Table 1
Itemized cost of conducting school malaria surveys using alternative diagnostic methods Kenya, 2008-2010*

| Item type | Unit | Unit cost in US dollars |  | Unit cost in US dollars |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | RDT Paracheck | Microscopy | Microscopy-corrected RDTs $\dagger$ | PCR-corrected RDTs $\dagger$ |
| Equipment ${ }^{\text {F }}$ | Dustbin | 0.04 | 0.04 | 0.04 | 0.04 |
|  | Timer | 0.23 |  | 0.23 | 0.23 |
|  | Cooler box | 0.54 |  | 0.54 | 0.54 |
|  | Wooden drying rack |  | 0.04 | 0.04 |  |
|  | Staining jars |  | 0.11 | 0.11 |  |
|  | Measuring cylinder |  | 0.04 | 0.04 |  |
|  | Scissors |  |  |  | 0.04 |
|  | Stapler |  |  |  | 0.04 |
|  | Freezer |  |  |  | 0.95 |
|  | Internet dongle | 0.18 | 0.18 | 0.18 | 0.18 |
|  | Netbook computers | 6.31 | 6.31 | 6.31 | 6.31 |
| Salaries | Senior technician | 67.02 | 67.02 | 67.02 | 67.02 |
|  | Technician | 53.62 | 53.62 | 53.62 | 53.62 |
|  | Technician | 53.62 | 53.62 | 53.62 | 53.62 |
|  | Ministry of Education officer | 13.40 | 13.40 | 13.40 | 13.40 |
| Training | One-day training | 5.19 | 5.19 | 5.19 | 5.19 |
| Consumables | Stationery | 3.69 | 3.69 | 3.69 | 3.69 |
|  | Paracheck RDT | 156.30 |  | 156.30 | 156.30 |
|  | Filter paper |  |  |  | 15.06 |
|  | Blood lancet | 2.95 | 2.95 | 2.95 | 2.95 |
|  | Sharps container | 4.02 | 4.02 | 4.02 | 4.02 |
|  | Blood slides |  | 5.31 | 5.31 |  |
|  | Slide boxes |  | 5.63 | 5.63 |  |
|  | Buffer tablets |  | 3.08 | 3.08 |  |
|  | Distilled water |  | 0.40 | 0.40 |  |
|  | Giemsa stain |  | 1.46 | 1.46 |  |
|  | Kitchen rolls |  | 1.14 | 1.14 |  |
|  | Disposable gloves | 3.35 | 3.35 | 3.35 | 3.35 |
|  | Cotton wool | 0.25 | 0.25 | 0.25 | 0.25 |
|  | Methylated spirit | 0.40 | 0.40 | 0.40 | 0.40 |
|  | Bin bags | 0.27 | 0.27 | 0.27 | 0.27 |
|  | Paper towels | 1.14 | 1.14 | 1.14 | 1.14 |
|  | Resealable bags |  |  |  | 8.21 |
|  | Manilla paper |  |  |  | 0.40 |
|  | Staples |  |  |  | 0.30 |
|  | Questionnaires | 13.40 | 13.40 | 13.40 | 13.40 |
| Slide reading | Immersion oil |  | 6.03 | 0.13 |  |
|  | Lens tissue |  | 2.95 | 0.06 |  |
|  | Tally counters |  | 0.04 | 0.04 |  |
|  | Double slide reading |  | 442.36 | 33.62 |  |
|  | Third reading§ |  | 80.43 | 6.05 |  |
|  | Printing costs |  | 0.67 | 0.07 |  |
| PCR | Standard PCR |  |  |  | 341.176 |
| Transport and communication | Car hire and driver | 134.05 | 134.05 | 134.05 | 134.05 |
|  | Fuel and maintenance | 40.21 | 40.21 | 40.21 | 40.21 |
|  | Airtime | 5.36 | 5.36 | 5.36 | 5.36 |
|  | Supervision | 35.25 | 35.25 | 35.25 | 35.25 |
| Sub-total |  | 600.81 | 993.41 | 691.59 | 966.98 |
| Contingency (10\%) |  | 60.08 | 99.34 | 69.16 | 96.70 |
| Total |  | 660.89 | 1,092.75 | 723.77 | 1,063.68 |

*RDT = rapid diagnostic test; PCR = polymerase chain reaction. The number of units and cost required for sampling 110 children in one school.
$\dagger$ Cost calculated assuming that all RDT-positive samples and equal number of RDT-negative samples would be examined at 7.6\% RDT Plasmodium spp. prevalence.
$\ddagger$ Cost calculated assuming that all RDT-positive samples and equal number of RDT-negative
$\ddagger$ Capital costs assuming a 3\% discount rate and that the items would be used in
§ Cost calculated assuming that $18 \%$ of the slides will have discordant readings.

## Supplemental Table 2

Classification of district-level Plasmodium spp. infection prevalence by rapid diagnostic tests compared with microscopy-corrected rapid diagnostic test results, according to prevalence category in school malaria surveys in Kenya, 2008-2010*

| Plasmodium spp.prevalence e $\%$ categoryby microscopy-correctedRDT results | Plasmodium spp. prevalence (\%) category by RDT results |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0-0.9 | 1-4.9 | 5-39.9 | > 40 |  |
| 0-0.9 | 42 (95.5) | 2 (4.6) | 0 | 0 | 44 |
| 1-4.9 | 0 | 5 (50.0) | 5 (50.0) | 0 | 10 |
| 5-39.9 | 0 | 0 | 11 (84.6) | 2 (15.4) | 13 |
| > 40 | 0 | 0 | 0 | 2 (100) | 2 |

*RDT = rapid diagnostic test.

Supplemental Table 3
Classification of school-level Plasmodium infection prevalence by rapid diagnostic tests compared with microscopy-corrected rapid diagnostic test results, according to prevalence category in school malaria surveys in Kenya, 2008-2010*

| Plasmodium spp. <br> prevalence $(\%)$ category <br> by microscopy-corrected <br> RDT results | Plasmodium spp. prevalence (\%) <br> category by RDT results |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | ---: |
|  | $0-0.9$ | $1-4.9$ | $5-39.9$ | $>40 \%$ | Total |
| $0-0.9$ | $269(80.8)$ | $38(11.4)$ | $18(5.4)$ | $8(2.4)$ | 333 |
| $1-4.9$ | $3(4.9)$ | $32(52.5)$ | $23(37.7)$ | $3(4.9)$ | 61 |
| $5-39.9$ | 0 | 0 | $62(82.7)$ | $13(17.3)$ | 75 |
| $>40$ | 0 | 0 | 0 | $11(100)$ | 11 |
| *RDT $=$ rapid diagnostic test. |  |  |  |  |  |

*RDT = rapid diagnostic test.

