**Supplementary Table S2. Prevalence of asymptomatic malaria infections by economic activities, gender and experience of visiting health facilities for treatments of symptomatic malaria**

|  |  |  |  |
| --- | --- | --- | --- |
| **Study sites** | **Prevalence by economic activities*****n* (%)** | **Prevalence by gender*****n* (%)** | **Prevalence by infections status** ***n* (%)** |
| **Village (*n*)** | Cropping\*\*\* | Pastoralist | Cropping &pastoralist | Employed | Students\*\*\* | Others\* | Males\*\* | Females | Mono-infections\*\*\*  | Multi-infections  |
| Nyangalamila (84) | 28 (33.3) | 2(2.4) | 4 (4.8) | 12 (14.3) | 28 (33.3) | 10 (11.9) | 45 (53.6) | 39 (46.4) | 75 (89.3) | 9 (10.7) |
| Kayenze (77) | 27 (35.1) | 4 (5.2) | 5 (6.5) | 5 (6.5) | 20 (26.0) | 16 (20.8) | 51 (66.2) | 26 (33.8) | 72 (93.5) | 5 (6.5) |
| Rwantaba (133) | 30 (22.6) | 0 (0.0) | 7 (5.3) | 1 (0.8) | 75 (56.4) | 20 (15.0) | 79 (59.4) | 54 (40.6) | 100 (75.2) | 33 (24.8) |
| Ihanga (169) | 42 (24.9) | 3 (1.8) | 18 (10.7) | 3 (1.8) | 72 (42.6) | 31 (18.3) | 91 (53.9) | 78 (46.2) | 139 (82.2) | 30 (17.8) |
| **GEITA (463)** | **127 (27.4)** | **9 (1.9)** | **34 (7.3)** | **21 (4.5)** | **195 (42.1)** | **77 (16.6)** | **266 (57.5)** | **197 (42.6)** | **386 (83.4)** | **77 (16.6)** |
| Kumuhasha (104) | 23 (22.1) | 4 (3.8) | 10 (9.6) | 3 (2.9) | 51 (49.0) | 13 (12.5) | 62 (59.6) | 42 (40.4) | 81 (77.9) | 23 (22.1) |
| Bunyambo (87) | 22 (25.3) | 1 (1.1) | 7 (8.0) | 1 (1.1) | 38 (43.7) | 18 (20.7) | 56 (64.4) | 31 (35.6) | 73 (83.9) | 14 (16.1) |
| Nyamnyusi (98) | 25 (25.5) | 3 (3.1) | 2 (2.0) | 4 (4.1) | 52 (53.1) | 12 (12.2) | 54 (55.1) | 44(44.9) | 84 (85.7) | 14 (14.3) |
| Mugombe (90) | 21 (23.3) | 1 (1.1) | 8 (8.9) | 2 (2.2) | 48 (53.3) | 10 (11.1) | 46 (51.1) | 44 (48.9) | 73 (81.1) | 17 (18.9) |
| **KIGOMA (379)** | **91 (24.0)** | **9 (2.4)** | **27 (7.1)** | **10 (2.6)** | **189 (49.9)** | **53 (14.0)** | **218 (57.5)** | **161 (42.5)** | **311 (82.1)** | **68 (17.9)** |
| Maji ya chai (10) | 4 (40.0) | 1 (10.0) | 1 (10.0) | 0 (0.0) | 2 (20.0) | 2 (20.0) | 6 (60.0) | 4 (40.0) | 10 (100.0) | 0 (0.0) |
| Ngurudoto (5) | 3 (60.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (20.0) | 1 (20.0) | 3 (60.0) | 2 (40.0) | 5 (100.0) | 0(0.0) |
| Bwawani (14) | 4 (28.6) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 7 (50.0) | 3 (21.4) | 9 (64.3) | 5 (35.7) | 10 (71.4) | 4 (28.6) |
| Themi simba (3) | 3 (100.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3 (100.0) | 0 (0.0) | 2 (66.7) | 1 (33.3) |
| **ARUSHA (32)** | **14 (43.8)** | **1 (3.1)** | **1 (3.1)** | **0 (0.0)** | **10 (31.3)** | **6 (18.8)** | **21 (65.6)** | **11 (34.4)** | **27 (84.4)** | **5 (15.6)** |
| **OVERALL (874)** | **232 (26.5)** | **19 (2.2)** | **62 (7.1)** | **31 (3.5)** | **394 (45.1)** | **136(15.6)** | **505 (57.8)** | **369 (42.2)** | **724 (82.8)** | **150 (17.2)** |

\* Statistical significance was indicated by \*\* (p < 0.01) and \*\*\* (p < 0.001) using one-way ANOVA analysis.