**Table 1.** Characteristics of lymphatic filariasis prevalence studies where microfilaraemia(pMF) and antigenemia (pICT) were assessed in the same sample population

| **Continent** | **Study** | **Country** | **Pre-control/****post-control** | **Population****surveyed mf** | **pMF** | **Population****surveyed ICT** | **pICT** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **median (IQR)** | **median (IQR)** |
| Africa | aBenin MoH, 20021 | Benin | 0/1 | 519 | 0.4  | 519 | 0  |
| aBurkina Faso MoH, 20102 | Burkina Faso | 6/3 | 3478 | 7.4 (2.3-8.7) | 2520 | 18.8 (10.1-20.7) |
| aCote d’Ivoire, 20093 | Cote d'Ivoire | 3/0 | 794 | 1.9 (1.2-2.5) | 230 | 16.9 (1.2-17.3) |
| Ramzy et al., 19994 | Egypt | 0/4 | 1813 | 2.9 (1.9-6.6) | 1813 | 8.2 (4.4-12.7) |
| Ramzy et al., 20065 | Egypt | 10/2 | 9127 | 1.3 (0.3-2.9) | 11134 | 5 (3-12.1) |
| Geshere et al., 20126 | Ethiopia | 0/1 | 123 | 0  | 60 | 0  |
| aGhana MoH, 20017 | Ghana | 0/9 | 915 | 20 (18-23) | 915 | 40 (37-42) |
| Simonsen et al., 20028 | Kenya | 0/1 | 1013 | 2.7  | 1013 | 16.5  |
| Njenga et al., 20119 | Kenya | 8/8 | 2498 | 10.6 (1-22.2) | 2505 | 21.6 (10.5-33.9) |
| Nielsen et al., 200210 | Malawi | 0/2 | 537 | 21.5 (20.3-22.6) | 507 | 64.4 (63.4-65.4) |
| aNiger MoH, 200810 | Niger | 0/2 | 984 | 0.9 (0.4-1.4) | 150 | 21.5 (17-26) |
| aNiger MoH, 200911 | Niger | 2/0 | 1075 | 0.3 (0.2-0.4) | 150 | 34.5 (17-52) |
| aNigeria MoH, 200412 | Nigeria | 7/2 | 2726 | 1.8 (1.7-7.4) | 2726 | 15.3 (1.8-22.9) |
| aNigeria MoH, 200613 | Nigeria | 9/0 | 1163 | 0.7 (0.5-2.5) | 1163 | 0.7 (0.5-2.5) |
| aNigeria MoH, 200814 | Nigeria | 10/0 | 1013 | 0 (0-2.7) | 1013 | 7.4 (1.8-9.8) |
| aNigeria MoH, 200915 | Nigeria | 3/0 | 1472 | 1.8 (1.2-3.1) | 0 | 0 |
| aNigeria MoH, 201016 | Nigeria | 0/3 | 1294 | 10.8 (2.9-12.3) | 50 | 0 (0-46) |
| Richards et al., 201117 | Nigeria | 34/10 | 9897 | 1.1 (0-3.9) | 9332 | 10.1 (5.5-22.3) |
| Ekanem et al., 201118 | Nigeria | 0/1 | 222 | 0 | 222 | 17.1  |
| Ebenezer et al., 201119 | Nigeria | 0/1 | 1803 | 7  | 1803 | 11.3  |
| aTogo MoH, 200120 | Togo | 0/7 | 3500 | 1.2 (0.8-10.6) | 615 | 4.9 (2.7-31.3) |
| aTogo MoH, 200821 | Togo | 3/0 | 1501 | 0 (0-2) | 1785 | 2.6 (0.3-8.4) |
| Meyrowitsch et al., 200422 | Tanzania | 2/0 | 1024 | 18.4 (16.7-20.1) | 1024 | 44.3 (43.5-45.1) |
| Onapa et al., 2001b23 | Uganda | 0/1 | 173 | 0  | 289 | 0  |
| Onapa et al., 2001a24 | Uganda | 0/3 | 1257 | 22.4 (9.7-25.5) | 2686 | 29.1 (18.3-30.1) |
| aUganda MoH, 201025 | Uganda | 4/0 | 2062 | 0.2 (0-0.5) | 454 | 0  |
| Ashton et al., 201126 | Uganda | 14/0 | 938 | 4.7 (0-8.7) | 1398 | 13 (3.4-37.5) |
| Americas | Aguiar-Santos et al., 201327 | Brazil | 0/1 | 159 | 1.2  | 159 | 13.8  |
| Braga et al., 200328 | Brazil | 0/1 | 625 | 6.8  | 625 | 31.7  |
| Braga et al., 200529 | Brazil | 0/1 | 1130 | 6.9  | 790 | 25.7  |
| De Rochars et al., 200530 | Haiti | 0/4 | 455 | 9.5 (7.4-13.5) | 455 | 35.7 (22.4-43.5) |
| Boyd et al., 201031 | Haiti | 6/0 | 3499 | 4.4 (4.2-7.4) | 3465 | 16.9 (11.8-28.7) |
| Asia | Ramaiah et al., 2007b32 | India | 0/1 | 238 | 17.2  | 57 | 17.5  |
| Chhotray et al., 200533 | India | 0/2 | 4297 | 10.3 (9.5-11) | 2400 | 17.3 (16.8-17.8) |
| Sunish et al., 200134 | India | 0/1 | 3505 | 12.2  | 3505 | 23.7  |
| Ramaiah & Vanamail, 201335 | India | 3/0 | 415 | 0.4 (0-3.6) | 415 | 3.6 (0-4) |
| Chandrasena et al., 200236 | Sri Lanka | 0/2 | 226 | 30.8 (27.5-34.2) | 226 | 34.8 (34.2-35.3) |
| Gunawardena et al., 200737 | Sri Lanka | 24/0 | 4008 | 0  | 4008 | 1.4 (0-3.7) |
| Bhumiratana et al., 199938 | Thailand | 0/1 | 225 | 5.8 | 225 | 20  |
| Bhumiratana et al., 200239 | Thailand | 0/1 | 219 | 3.7  | 219 | 23.7  |
| Oceania | bWHO Country report | Fiji | 4/0 | 6762 | 0.7 (0.2-1.6) | 6762 | 7 (1.9-13.3) |
| WHO Annual report, 200340 | New Caledonia | 0/1 | 382 | 3.6  | 382 | 32.5  |
| Fraser et al., 200541 | Vanuatu | 10/8 | 2079 | 2.2 (0-7.1) | 2079 | 10.2 (3.9-27.2) |
| Ichimori et al., 200742 | Samoa | 1/0 | 4054 | 1.1  | 4054 | 4.2  |
| Joseph et al., 201143 | Samoa | 7/0 | 1269 | 0.5 (0.2-0.6) | 1269 | 14.6 (8.4-16.7) |
| cWHO Country report | Samoa | 7/0 | 6448 | 0.4 (0.2-0.8) | 6448 | 2.1 (0.7-3) |

ICT: immuno-chromatographic test; mf: microfilariae; IQR = inter-quartile range.

a Unpublished data.

b http://www.wpro.who.int/southpacific/pacelf/countries/fji/activities/en/index.html.

c http://www.wpro.who.int/southpacific/pacelf/countries/wsm/activities/en/index.html.

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**Sensitivity analysis upon regression model**

We conducted a sensitivity analysis by fitting various models based solely on thick smears based on 1. 20 µl of blood volume; 2. 20 to 60 µl of blood (equivalent to 1-3 thick smears); and 3. 50 µl or 60 µl of blood, as follows:

for each survey $i=1,…,N,$

$$Y\_{mf\_{i}}|p\_{mf\_{i}}∼Binomial (N\_{mf\_{i}},p\_{mf\_{i}})$$

**Model 1. Only thick smears based on 20 µl of blood**

$$logit \left(p\_{Mf\_{i}}\right)= α+α\_{1}logit \left(p\_{ICT\_{i}}\right)+α\_{PRE}×PRE\_{i}+α\_{1PRE }logit \left(p\_{ICT\_{i}}\right)×PRE\_{i} $$



DIC = 863.9; DIC with random effects = 316.7

**Model 2. Thick smears based on 20-60 µl of blood**

$$logit \left(p\_{Mf\_{i}}\right)= α+α\_{1}logit \left(p\_{ICT\_{i}}\right)+α\_{PRE}×PRE\_{i}+α\_{1PRE }logit \left(p\_{ICT\_{i}}\right)×PRE\_{i} $$



DIC = 2147.6; DIC with random effects = 858.3

**Model 3. Thick smears based on 20-60 µl of blood, and adjusting by blood volume**

$logit \left(p\_{Mf\_{i}}\right)= α+α\_{1}logit \left(p\_{ICT\_{i}}\right)+α\_{PRE}×PRE\_{i}+α\_{1PRE }logit \left(p\_{ICT\_{i}}\right)×PRE\_{i}$ + $α\_{BLOOD50}×BLOOD\_{50}+α\_{BLOOD60}×BLOOD\_{60}$



DIC = 2041.8; DIC with random effects = 852.5

None of the new models improve the overall model fit and therefore we have not altered the results.