### Supplemental information

**SI Table 1 Age-based dosing guidelines used for administering DHAp (Sigma Tau)**

| Age        | Weight (kg) | DHAP (40/320mg) |          |          |
|------------|-------------|-----------------|----------|----------|
|            | (kg)        | pill count per day | mg | mg |
| 0–3 months | <5          | 0.5             | 2.50 | 20.00 |
| 3–12 months| 8           | 0.5             | 2.50 | 20.00 |
| 1 year     | 10          | 1               | 4.00 | 32.00 |
| 2          | 11          | 1               | 3.64 | 29.09 |
| 3          | 15          | 1               | 2.67 | 21.33 |
| 4          | 15          | 1               | 2.67 | 21.33 |
| 5          | 18          | 1               | 2.22 | 17.78 |
| 6          | 21          | 1               | 1.90 | 15.24 |
| 7          | 23          | 1               | 1.74 | 13.91 |
| 8          | 25          | 2               | 3.20 | 25.60 |
| 9          | 28          | 2               | 2.86 | 22.86 |
| 10         | 30          | 2               | 2.67 | 21.33 |
| 11         | 35          | 2               | 2.29 | 18.29 |
| 12         | 39          | 2               | 2.05 | 16.41 |
| 13         | 45          | 2               | 1.78 | 14.22 |
| 14         | 50          | 3               | 2.40 | 19.20 |
| ≥15 years  | >50         | 3               | <2.4  | <19.2  |

**AVG mg/kg/day**
- 2.57
- 20.57
### SI Table 2. Baseline characteristics of intervention and control households obtained from the parasite survey in April-May 2014

| Characteristic                                      | MDA (n = 1,047 children / 857 households) | fMDA (n = 985 children / 850 households) | Control (n = 976 children / 866 households) |
|-----------------------------------------------------|------------------------------------------|------------------------------------------|---------------------------------------------|
| % Children by age included for parasite testing (in years) |                                          |                                          |                                             |
| 3 month – 1 year                                    | 12.70 (9.81 – 15.60)                     | 11.98 (9.98 – 14.03)                     | 12.81 (10.62 – 14.50)                       |
| 1                                                   | 17.96 (15.89 – 20.02)                    | 17.87 (14.73 – 21.01)                    | 15.68 (13.56 – 17.79)                       |
| 2                                                   | 15.85 (13.99 – 17.72)                    | 17.36 (15.18 – 19.54)                    | 17.52 (13.45 – 21.59)                       |
| 3                                                   | 15.76 (13.44 – 18.07)                    | 17.46 (14.95 – 19.97)                    | 17.62 (15.29 – 19.96)                       |
| 4                                                   | 17.67 (14.50 – 20.84)                    | 17.87 (15.28 – 20.45)                    | 19.06 (17.34 – 20.77)                       |
| 5                                                   | 20.06 (17.23 – 22.88)                    | 17.46 (14.70 – 20.23)                    | 17.32 (14.08 – 20.55)                       |
| Sex of children included for parasite testing (% male) | 48.14 (44.90 – 51.37)                    | 50.86 (46.44 – 55.28)                    | 52.25 (49.00 – 55.51)                       |
| % Children included for parasite testing by household wealth quintile |                                          |                                          |                                             |
| 1 - Poorest                                         | 32.66 (23.63 – 41.70)                    | 21.73 (15.63 – 27.82)                    | 27.97 (20.05 – 35.89)                       |
| 2                                                   | 19.10 (13.38 – 24.82)                    | 25.69 (20.78 – 30.59)                    | 19.06 (14.41 – 23.70)                       |
| 3                                                   | 20.73 (15.77 – 25.68)                    | 19.29 (14.21 – 24.37)                    | 21.21 (16.16 – 26.26)                       |
| 4                                                   | 17.86 (12.64 – 23.08)                    | 16.65 (12.20 – 21.10)                    | 18.95 (14.38 – 23.53)                       |
| 5 - Least poor                                      | 9.65 (6.04 – 13.25)                      | 16.65 (9.41 – 23.89)                     | 12.81 (6.99 – 18.63)                       |

*Significantly different with p < 0.05*