Cover page

Official Title: Exploring the impact of scaling up mass testing, treatment and tracking on malaria prevalence among children in the Pakro sub district of Ghana

NCT:

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Document: Study Results

Coverage

Four MTTT interventions were conducted in July 2017, November 2017, March 2018 and July 2018. Of the 5,000 participants initially targeted across communities for each intervention, coverage ranged from 77.8% (3891/5000) to 98.8% (4,941/5,000) (Table 1). A total of 2,669 participants received all four MTTTs (53%) and the median number of MTTTs participants received was 3. The proportions represent those who were effectively reached and tested. Females made up 50.4% and 52.4% of participants in July 2017 and July 2018, respectively (Table 1).

Asymptomatic parasitaemia prevalence

Table 1: Parasite carriage across different communities at different time points in the Pakro sub-district

Characteristics	Prevalence of asymptomatic parasitaemia among community members N (%)			
	July 2017 Survey n/N (%)	November 2017 Survey n/N (%)	March 2018 Survey n/N (%)	July 2018 Survey n/N (%)
Community				
Abease	282/888 (31.8)	124/712 (17.4)	77/709 (10.9)	161/721 (22.3)
Adesa	158/406 (38.9)	85/323 (26.3)	62/351 (17.7)	121/342 (35.4)
Adjanase	514/1342 (38.3)	191/957 (20.0)	283/1070 (26.5)	387/1037 (37.3)
Fante Town	543/1530 (35.5)	306/1238 (24.7)	347/1284 (27.0)	392/1236 (31.7)
Odumtokro	101/245 (41.2)	42/213 (19.7)	43/190 (22.6)	63/180 (35.0)
Piem	80/220 (36.4)	35/183 (19.3)	50/157 (31.9)	57/160 (35.6)
Sachi/Tabankro	117/310 (37.7)	75/265 (28.3)	75/277 (27.1)	122/290 (42.1)
Total	**1795/4941 (36.3)**	**858/3891 (22.1)**	**937/4038 (23.2)**	**1303/3966 (32.9)**
Coverage	**4941/5000(98.8)**	**3891/5000(77.8)**	**4038/5000(80.8)**	**3966/5000 (79.3)**

An increase in parasite carriage was observed for Sachi/Tabankro from July 2017 to July 2018. However, this was not significant, (Table 2).

The highest decline in parasitaemia carriage, was observed in Abease while the lowest decline was observed in Adesa. It is not clear what accounted for the heterogeneity as there were no other interventions in the area at the time of this study. Asymptomatic parasitaemia prevalence from July 2017 and July 2018

significantly decreased in both children and adults (p=0.002 for <15 children and p=0.001 for ≥15 years) (Table 2).

As per age group, asymptomatic parasitaemia prevalence significantly declined in the age groups 5-14 and 15-45 years, but the decline was marginally significant in the age group 1-4. This decline in parasitaemia was not significant in the age groups 46-65 and >65 years. An increase in parasitaemia prevalence was observed among the <1 year old age group between July 2017 and 2018. But this was not significant.

Table 2: Univariate analysis of effect of MTTT interventions on prevalence of asymptomatic malaria parasitaemia over the time points July 2017 and 2018.

Characteristics	July 2017 Survey	July 2018 Survey	χ^2 value	P value
Community	**n/N (%)**	**n/N (%)**		
Abease	282/888 (31.8)	161/721 (22.3)	17.1	<0.001**
Adesa	158/406 (38.9)	121/342 (35.4)	1	0.319
Adjanase	514/1342 (38.3)	387/1037 (37.3)	0.2	0.624
Fante Town	543/1530 (35.5)	392/1236 (31.7)	4.4	0.037**
Odomtokro	101/245 (41.2)	63/180 (35.0)	1.7	0.193
Piem	80/220 (36.4)	57/160 (35.6)	0	0.882
Sachi/Tabankro	117/310 (37.7)	122/290 (42.1)	1.17	0.279
All Communities	**1795 (36.3)**	**1303 (32.9)**	**11.71**	**0.001****
Age_group (years)	**n/N (%)**	**n/N (%)**		
0 - 11 months	14/56 (25.0)	22/57 (38.6)	2.4	0.121
1 - 4 years	270/541 (49.9)	216/491 (44.0)	3.6	0.057
5 - 14 years	759/1387 (54.7)	582/1180 (49.3)	7.5	0.006**
15 - 45 years	5852092 (28.0)	360/1523 (23.6)	8.5	0.003**
46 - 65 years	129/640 (20.2)	97/544 (17.8)	1	0.310
> 65 years	38/225 (16.9)	26/171 (15.2)	0.2	0.352
Total # of <15	**1043/1984 (52.6)**	**820/1728 (47.5)**	**9.7**	**0.002****
Total # of ≥15	**752/2957 (25.4)**	**483/2238 (21.6)**	**10.4**	**0.001****
Mean axillary Temperature	36.0	36.2		<0.001**
Use ITN				
No	1595/4574 (34.9)	380/1166 (32.5)	0.0012	<0.001
Yes	200/367 (54.5)	923/2800 (33.0)		

** Significance level at α =0.05