

Supplementary tables (posted as supplied by authors)

Table A.

Socio-economic characteristics of the households in intervention and control sites

Characteristic	Mexico		Nicaragua	
	Intervention	Control	Intervention	Control
Lower quality housing (temporary or semi-permanent structure)	3597/6163 (58.4%)	3316/6174 (53.7%)	0/4203 (0%)	0/4199 (0%)
Business run from same premises as household	280/6182 (4.5%)	312/6194 (5%)	857/4203 (20.4%)	878/4199 (20.9%)
Head of household with less than five years of education	2630/6135 (42.9%)	2411/6130 (39.1%)	823/4134 (19.9%)	824/4127 (20.0%)
Head of household without full-time remunerated employment	1087/6169 (17.6%)	1134/6196 (18.3%)	1531/4203 (34.5%)	1448/4199 (34.5%)
Problems with drinking water or need to purchase bottled water	4126/6186 (66.7%)	4602/6193 (74.3%)	2509/4012 (62.5%)	2361/3993 (59.1%)
Female respondent to the questionnaire	5042/6185 (81.5%)	5025/6204 (81%)	3162/4134 (76.5%)	3270/4154 (78.7%)

Table B. Cluster-specific rates of principal outcomes

Cluster-specific rates of recent dengue virus infection, 3-9 year-olds, 2x or more increase of IgG across paired samples; households affected /households providing a sample in intervention and control clusters

CLUSTER	INTER=1	CLUSTER	INTER=2
101	1/32	0.03	103 2/25 0.08
102	4/27	0.15	107 7/34 0.21
104	6/39	0.15	109 3/31 0.10
105	7/30	0.23	114 10/30 0.33
106	4/43	0.09	116 3/30 0.10
108	6/36	0.17	117 1/35 0.03
110	4/31	0.13	118 3/33 0.09
111	9/34	0.26	119 6/36 0.17
112	8/49	0.16	120 5/28 0.18
113	4/29	0.14	121 1/12 0.08
115	8/33	0.24	124 1/11 0.09
122	7/27	0.26	125 2/12 0.17
123	3/12	0.25	126 2/17 0.12
127	5/20	0.25	128 12/47 0.26
130	3/29	0.10	129 6/17 0.35
132	10/50	0.20	131 3/18 0.17
135	8/33	0.24	133 10/42 0.24
138	0/35	0.00	134 10/39 0.26
139	1/28	0.04	136 4/30 0.13
141	2/24	0.08	137 1/23 0.04
142	1/28	0.04	140 0/25 0.00
143	0/41	0.00	144 1/32 0.03
147	0/28	0.00	145 0/18 0.00
148	0/30	0.00	146 2/46 0.04
151	3/36	0.08	149 8/35 0.23
152	2/26	0.08	150 3/29 0.10
155	5/60	0.08	153 9/42 0.21
156	1/47	0.02	154 4/48 0.08
157	0/32	0.00	158 4/20 0.20
159	0/29	0.00	160 0/32 0.00
162	3/86	0.03	161 8/49 0.16
163	1/28	0.04	164 10/67 0.15
165	2/93	0.02	168 5/71 0.07
166	1/71	0.01	170 2/33 0.06
167	0/64	0.00	171 2/38 0.05
169	0/52	0.00	172 7/43 0.16
173	2/38	0.05	174 3/47 0.06
180	0/26	0.00	175 5/30 0.17
			182 7/42 0.17
			183 3/80 0.04
			184 0/38 0.00
			185 1/36 0.03
			186 2/41 0.05
			189 11/56 0.20
			190 6/54 0.11
			201 3/47 0.06
			202 5/39 0.13
			205 5/41 0.12
			209 9/58 0.16
			210 4/50 0.08
			211 6/38 0.16
			212 13/60 0.22
			213 10/52 0.19
			215 7/71 0.10
			217 11/66 0.17
			222 6/66 0.09
			223 9/56 0.16
			224 4/53 0.08
			225 6/43 0.14
			226 7/48 0.15
			227 12/70 0.17
			229 7/47 0.15
			234 8/62 0.13
			239 9/44 0.20
			240 8/54 0.15
			241 5/56 0.09
			242 12/53 0.23
			243 6/57 0.11
			245 10/40 0.25
			249 15/68 0.22
			253 15/61 0.25
			255 3/47 0.06
			256 6/76 0.08
			259 9/68 0.13
			261 10/66 0.15
			176 4/34 0.12
			177 4/61 0.07
			178 6/39 0.15
			179 3/25 0.12
			181 3/56 0.05
			187 2/35 0.06
			188 2/58 0.03
			203 12/64 0.19
			204 8/64 0.13
			206 5/49 0.10
			207 6/49 0.12
			208 2/54 0.04
			214 10/67 0.15
			216 14/65 0.22
			218 20/69 0.29
			219 18/66 0.27
			220 10/66 0.15
			221 10/56 0.18
			228 10/68 0.15
			230 13/55 0.24
			231 8/57 0.14
			232 6/60 0.10
			233 4/51 0.08
			235 12/59 0.20
			237 4/29 0.14
			238 12/68 0.18
			244 8/46 0.17
			246 12/46 0.26
			247 8/47 0.17
			248 4/54 0.07
			250 11/74 0.15
			251 14/58 0.24
			252 10/40 0.25
			254 10/62 0.16
			257 13/48 0.27
			258 4/47 0.09
			260 7/37 0.19
			391/3460 0.113
			474/3238 0.146

Cluster-specific rates household index (houses infested with *Ae aegypti* larvae or pupae / houses inspected) in intervention and control clusters

CLUSTER	INTER=1	CLUSTER	INTER=2	CLUSTER	INTER=1	CLUSTER	INTER=2				
101	33/144	0.23	103	25/99	0.25	182	1/135	0.01	176	19/114	0.17
102	21/122	0.17	107	20/104	0.19	183	9/154	0.06	177	7/132	0.05
104	23/123	0.19	109	8/101	0.08	184	5/103	0.05	178	3/120	0.03
105	13/120	0.11	114	37/107	0.35	185	0/81	0.00	179	18/109	0.17
106	16/119	0.13	116	17/119	0.14	186	11/134	0.08	181	16/138	0.12
108	13/112	0.12	117	32/127	0.25	189	3/99	0.03	187	17/120	0.14
110	8/122	0.07	118	27/132	0.20	190	0/117	0.00	188	0/138	0.00
111	8/124	0.06	119	46/130	0.35	201	23/126	0.18	203	20/134	0.15
112	40/135	0.30	120	37/142	0.26	202	19/129	0.15	204	30/133	0.23
113	23/107	0.21	121	4/125	0.03	205	14/133	0.11	206	11/130	0.08
115	14/88	0.16	124	0/100	0.00	209	6/122	0.05	207	26/131	0.20
122	30/128	0.23	125	1/106	0.01	210	41/135	0.30	208	28/135	0.21
123	6/117	0.05	126	11/112	0.10	211	15/136	0.11	214	25/138	0.18
127	14/106	0.13	128	43/117	0.37	212	6/137	0.04	216	17/138	0.12
130	8/89	0.09	129	10/112	0.09	213	41/138	0.30	218	39/137	0.28
132	6/125	0.05	131	2/72	0.03	215	25/138	0.18	219	62/139	0.45
135	16/149	0.11	133	8/120	0.07	217	17/137	0.12	220	32/136	0.24
138	7/122	0.06	134	12/88	0.14	222	21/137	0.15	221	20/140	0.14
139	15/133	0.11	136	27/145	0.19	223	28/136	0.21	228	37/136	0.27
141	33/140	0.24	137	30/133	0.23	224	24/139	0.17	230	67/137	0.49
142	39/112	0.35	140	38/163	0.23	225	11/137	0.08	231	19/137	0.14
143	16/128	0.13	144	6/70	0.09	226	20/140	0.14	232	21/139	0.15
147	42/108	0.39	145	15/61	0.25	227	22/140	0.16	233	39/139	0.28
148	29/129	0.22	146	37/131	0.28	229	6/136	0.04	235	59/135	0.44
151	10/139	0.07	149	50/117	0.43	234	55/136	0.40	237	30/133	0.23
152	9/72	0.13	150	17/106	0.16	239	19/133	0.14	238	48/139	0.35
155	23/127	0.18	153	45/119	0.38	240	24/137	0.18	244	34/134	0.25
156	19/117	0.16	154	56/146	0.38	241	9/136	0.07	246	11/131	0.08
157	28/111	0.25	158	30/90	0.33	242	24/136	0.18	247	45/137	0.33
159	5/102	0.05	160	33/94	0.35	243	7/136	0.05	248	19/137	0.14
162	2/139	0.01	161	21/143	0.15	245	11/134	0.08	250	35/133	0.26
163	11/75	0.15	164	12/133	0.09	249	41/137	0.30	251	10/137	0.07
165	19/150	0.13	168	28/131	0.21	253	32/134	0.24	252	23/133	0.17
166	6/149	0.04	170	20/93	0.22	255	10/117	0.09	254	29/138	0.21
167	1/118	0.01	171	26/137	0.19	256	13/152	0.09	257	8/132	0.06
169	10/155	0.06	172	2/142	0.01	259	8/137	0.06	258	43/134	0.32
173	5/155	0.03	174	8/114	0.07	261	48/138	0.35	260	10/132	0.08
180	6/115	0.05	175	9/83	0.11						

1296/9508 0.136

1827/9299 0.196

Cluster-specific container index (containers positive for *Aedes aegypti* larvae or pupa/total containers examined) in intervention and control clusters

CLUSTER	INTER=1	CLUSTER	INTER=2
101	65/558	0.12	103 34/435 0.08
102	37/471	0.08	107 25/342 0.07
104	39/375	0.10	109 19/640 0.03
105	18/443	0.04	114 49/509 0.10
106	31/718	0.04	116 28/574 0.05
108	15/248	0.06	117 58/859 0.07
110	10/455	0.02	118 41/698 0.06
111	10/514	0.02	119 115/963 0.12
112	64/979	0.07	120 68/723 0.09
113	33/443	0.07	121 4/315 0.01
115	20/358	0.06	124 1/348 0.00
122	48/285	0.17	125 2/384 0.01
123	11/332	0.03	126 18/390 0.05
127	25/304	0.08	128 67/480 0.14
130	8/198	0.04	129 10/276 0.04
132	9/337	0.03	131 4/145 0.03
135	28/346	0.08	133 18/532 0.03
138	15/190	0.08	134 20/201 0.10
139	22/290	0.08	136 32/263 0.12
141	41/519	0.08	137 45/285 0.16
142	57/341	0.17	140 39/322 0.12
143	23/297	0.08	144 9/181 0.05
147	72/350	0.21	145 21/148 0.14
148	44/347	0.13	146 44/333 0.13
151	13/960	0.01	149 88/384 0.23
152	11/252	0.04	150 24/277 0.09
155	31/800	0.04	153 60/642 0.09
156	40/823	0.05	154 99/710 0.14
157	37/704	0.05	158 56/694 0.08
159	9/647	0.01	160 53/611 0.09
162	4/829	0.01	161 31/1054 0.03
163	14/689	0.02	164 19/813 0.02
165	30/784	0.04	168 44/874 0.05
166	10/896	0.01	170 35/597 0.06
167	1/697	0.00	171 49/470 0.10
169	14/979	0.01	172 9/410 0.02
173	9/480	0.02	174 10/474 0.02
180	11/318	0.03	175 16/254 0.06
			182 3/314 0.01
			183 14/435 0.03
			184 7/383 0.02
			185 3/240 0.01
			186 13/473 0.03
			189 4/252 0.02
			190 0/335 0.00
			201 32/619 0.05
			202 18/523 0.03
			205 18/377 0.05
			209 6/333 0.02
			210 42/554 0.08
			211 20/428 0.05
			212 6/526 0.01
			213 57/667 0.09
			215 62/601 0.10
			217 10/415 0.02
			222 18/492 0.04
			223 28/498 0.06
			224 29/533 0.05
			225 14/531 0.03
			226 22/565 0.04
			227 27/485 0.06
			229 5/386 0.01
			234 71/667 0.11
			239 20/401 0.05
			240 34/620 0.05
			241 9/577 0.02
			242 13/440 0.03
			243 9/469 0.02
			245 13/335 0.04
			249 75/588 0.13
			253 63/826 0.08
			255 20/545 0.04
			256 17/725 0.02
			259 10/498 0.02
			261 63/525 0.12
			176 29/378 0.08
			177 8/280 0.03
			178 10/314 0.03
			179 31/303 0.19
			181 39/392 0.10
			187 21/386 0.05
			188 0/427 0.00
			203 20/469 0.04
			204 32/462 0.07
			206 13/358 0.04
			207 31/354 0.09
			208 31/446 0.07
			214 37/510 0.07
			216 24/502 0.05
			218 88/579 0.15
			219 106/690 0.15
			220 48/594 0.08
			221 20/542 0.04
			228 56/483 0.12
			230 125/650 0.19
			231 22/469 0.05
			232 24/605 0.04
			233 59/601 0.10
			235 90/627 0.14
			237 40/406 0.10
			238 64/764 0.08
			244 46/556 0.08
			246 14/391 0.04
			247 71/629 0.11
			248 25/468 0.05
			250 54/461 0.12
			251 15/597 0.03
			252 34/558 0.06
			254 35/536 0.07
			257 9/491 0.02
			258 54/601 0.09
			260 15/350 0.04
			1870/35533 0.053
			2804/34855 0.080

Supplementary Table C. Primary and secondary outcomes, intention to treat, household as unit of analysis (Odds ratio, first difference and Intra-class correlation coefficient); generalised linear mixed model, intervention as fixed effect, cluster as random effect

Primary outcomes	Intervention clusters	Control clusters	Odds ratio 95%CI	First difference 95%CI	ICC*
Serology**: household evidence of recent dengue virus infection, 3-9 year-olds, 2x or more increase of IgG across paired samples	391/3460	474/3238	0.74 0.57-0.94	-0.031 -0.057 -0.005	0.031
Self-reported dengue illness: households reporting in last year/responding households	542/9526	660/9302	0.79 0.64-0.98	-0.013 -0.024 -0.001	0.021
House index: houses infested with <i>Ae aegypti</i> larvae or pupae / houses inspected	1296/9508	1827/9299	0.65 0.51-0.83	-0.059 -0.091 -0.026	0.075
Container index: containers with <i>Ae aegypti</i> larvae or pupae / containers inspected (households above study average for index 0.1)	1551/9528	2154/9309	0.65 0.47 0.77	-0.073 -0.106 -0.039	0.070
Breteau index: containers with <i>Ae aegypti</i> larvae or pupae / houses inspected (households above study average for index 2.5)	97/9267	178/9005	0.55 0.34 0.86	-0.005 -0.009 -0.002	0.071
Pupae per person index: Number of <i>Ae aegypti</i> pupae / residential population (household with pupas)	549/9508	885/9299	0.56 0.41 0.77	-0.031 -0.049 -0.014	0.049
<u>Secondary outcomes</u>					
Conscious knowledge: Recognise sample of larva and know its relevance (Mexico only)	5349/5434	5092/5223	1.50 0.99 2.26	0.006 -0.0001 0.013	0.097
Opinion of pesticides: Agree (direct question) that temephos and fumigation are the best way to avoid mosquitoes/ households interviewed	7512/9442	7585/9224	0.80 0.67 0.95	-0.032 -0.056 -0.008	0.029
Subjective norm: Your neighbours believe its worthwhile to put time and energy into eliminating breeding sites in their homes (Mexico only)	3063/4337	2875/4179	1.09 0.87 1.38	0.020 -0.027 0.070	0.066
Intention to change: Do you plan to dedicate time and money each week to eliminate breeding sites (Mexico)	4360/5380	4052/5169	1.15 0.92 1.44	0.023 -0.013 0.060	0.071
Collective self-efficacy: Agree communities can themselves control dengue / households interviewed	4519/9338	3983/9109	1.23 1.08-1.40	0.052 0.023 0.082	0.030
Socialisation/discussion: Talk with neighbours about how to avoid mosquitoes	4030/9503	3644/9291	1.12 0.90 1.38	0.027 -0.029 0.077	0.087
Purchased pesticide: households that purchased in the last month /households interviewed	4800/9481	5097/9256	0.84 0.73 0.96	-0.044 -0.08 -0.009	0.032
Social capital: Neighbours in this street help one another out	6000/9489	5780/9266	1.03 0.87 1.23	0.008 -0/031 0.047	0.048

*ICC estimated for control group ** Proportion of households with a positive case, not total positive cases