

# THE LANCET Neurology

## Supplementary webappendix

This webappendix formed part of the original submission and has been peer reviewed.  
We post it as supplied by the authors.

Supplement to: Ngugi AK, Bottomley C, Kleinschmidt I, et al, for the SEEDS group.  
Prevalence of active convulsive epilepsy in sub-Saharan Africa and associated risk  
factors: cross-sectional and case-control studies. *Lancet Neurol* 2013; published online  
Jan 31. [http://dx.doi.org/10.1016/S1474-4422\(13\)70003-6](http://dx.doi.org/10.1016/S1474-4422(13)70003-6).

## APPENDICES

### Stage II (SII) screening questions

- Q1. Have you ever had a fit?
- Q2. Has someone ever told you that you have fits?
- Q3. Have you ever been told that you have epilepsy or epileptic fits?
- Q4. Have you ever had attacks in which you fall to the ground with loss of consciousness?
- Q5. Have you ever fallen to the ground without a reason and experienced:
- a) Twitching?
  - b) Shaking of the arms or legs without control?
  - c) Wetting yourself?
  - d) Biting of the tongue?
- Q6. Have you ever been told by a doctor that you have epilepsy or epileptic fits?
- If **Yes** to any of the above 6 questions:
- I. When did the seizures start?
  - II. When was the last seizure?
  - III. Have you ever had any seizure within the last **5** years?
  - IV. If **Yes**, how many seizures have you had within the last one year?
  - V. Did **all** the seizures occur with a febrile illness?
  - VI. Are you currently using any drugs for convulsions?

**Supplementary Table 1: Centre-specific comparison of the two- and three-stage methods for detecting cases of active convulsive epilepsy among participants selected in the population samples.**

Study centre	Sample	Two-stage method (SII+SIII)				Three-stage method (SI+SII+SIII)		Comparison		
		Screened SI	Screened SII	Positive SII	Screened SIII	Cases detected (crude)	*Adjusted prevalence (95% CI)		Cases detected (crude)	*Adjusted prevalence (95% CI)
<b>Kilifi</b>	6000	5883	5594	68	38	23	9•3 (7•4-12•8)	17	7•0 (5•0-9•4)	24•7
<b>Agincourt</b>	4500	4209	3889	67	58	26	9•8 (6•9-13•4)	16	7•4 (5•0-10•4)	24•5
<b>Iganga</b>	5000	4436	4053	125	46	22	19•7 (15•7-24•5)	15	10•1 (7•4-13•6)	48•7
<b>Ifakara</b>	5000	4702	4985	54	49	31	9•8 (7•2-13•0)	22	15•3 (12•0-19•2)	Nil
<b>Kintampo</b>	5000	4183	4849	38	24	16	15•5 (12•2-19•4)	11	12•4 (9•3-16•3)	20•0
<b>Overall</b>	25 500	23 413	23 371	352	215	116		81		

\*Adjusted for attrition and sensitivity of SII+SIII (76•7%) and SI+SII+SIII (48•6%); †Based on ratio of the two adjusted prevalence estimates.

**Supplementary Table 2: Demographic characteristics of cases and controls at each centre (AGN=Agincourt, IFA=Ifakara, IGN=Iganga, KIL=Kilifi, KIN=Kintampo )**

		Agincourt		Ifakara		Iganga-Mayuge		Kilifi		Kintampo		All	
		% Control	Case %	% Control	Case %	% Control	Case %	% Control	Case %	% Control	Case %	% Control	Case %
		(N=261)	(N=245)	(N=625)	(N=366)	(N=239)	(N=152)	(N=527)	(N=699)	(N=381)	(N=249)	(N=2033)	(N=1711)
Age†	<b>0-5</b>	4	4	7	7	21	34	16	14	3	2	10	11
	<b>6-12</b>	16	11	28	20	29	29	23	23	19	13	24	20
	<b>13-18</b>	10	15	23	24	18	16	19	21	28	25	21	21
	<b>19-28</b>	20	19	15	18	18	13	16	20	28	38	19	21
	<b>29-49</b>	33	35	21	25	11	7	15	13	17	17	19	19
	<b>50+</b>	16	16	6	6	3	2	11	9	6	5	8	8
Sex‡	<b>Female</b>	68	47	49	52	54	47	53	49	51	45	54	49
	<b>Male</b>	32	53	51	48	46	53	47	51	49	55	46	51
Education	<b>None</b>	21	20	17	28	24	27	46	51	48	43	32	38
	<b>Primary</b>	36	40	58	55	44	50	44	40	5	4	40	39
	<b>Secondary and above</b>	41	37	3	1	23	16	7	3	45	51	19	16
	<b>Unknown</b>	2	3	23	16	9	7	3	5	3	3	10	7

† 4 individuals missing age, ‡18 individuals missing sex

**Supplementary Table 3a: Risk factors for ACE in children by country (Agincourt)\***

	<b>Controls (n/N, %)</b>	<b>Cases (n/N, %)</b>	<b>Unadjusted OR (95% CI)</b>	<b>p value†</b>	<b>Adjusted OR (95% CI)</b>	<b>p value</b>
<b>Seizures in the family</b>	6•9(5/72)	15•9(13/82)	2•52(0•79,9•50)	0•130	3•06(0•97,9•67)	0•057
<b>Maternal seizures</b>	0•0(0/72)	2•5(2/81)	NA	0•498	NA	NA
<b>Abnormal delivery</b>	10•6(7/66)	10•3(8/78)	0•96(0•29,3•32)	1	0•92(0•29,2•96)	0•892
<b>Abnormal antenatal period</b>	3•2(2/63)	5•7(4/70)	1•85(0•25,21•02)	0•683	1•13(0•18,7•02)	0•894
<b>Home delivery</b>	12•9(9/70)	16•5(13/79)	1•34(0•49,3•80)	0•646	1•51(0•56,4•11)	0•415
<b>Problems after birth</b>	1•4(1/71)	7•7(6/78)	5•83(0•67,272•03)	0•119	4•03(0•41,39•26)	0•230
<b>Difficulties feeding, crying or breathing</b>	4•5(3/66)	10•1(7/69)	2•37(0•51,14•76)	0•326	2•03(0•46,8•93)	0•348
<b>Head injury</b>	1•4(1/73)	7•3(6/82)	5•68(0•66,264•98)	0•121	4•36(0•48,39•80)	0•192
<b>Malnourished</b>	20•8(15/72)	19•7(13/66)	0•93(0•37,2•32)	1	0•87(0•35,2•15)	0•765
<b>Eats cassava</b>	50•7(37/73)	46•3(38/82)	0•84(0•43,1•66)	0•631	0•85(0•42,1•74)	0•664
<b>Dogs in household</b>	13•7(10/73)	25•6(21/82)	2•17(0•89,5•58)	0•073	1•93(0•80,4•62)	0•142
<b>Cats in household</b>	8•2(6/73)	4•9(4/82)	0•57(0•11,2•54)	0•518	0•54(0•13,2•26)	0•398
<b>Eats Pork</b>	15•1(11/73)	11•1(9/81)	0•70(0•24,2•01)	0•483	0•63(0•23,1•77)	0•385
<b>Malaria IgG +ve (schizont)</b>	22•0(13/59)	23•9(11/46)	1•11(0•40,3•06)	0•82	1•26(0•45,3•49)	0•662
<b>Hospitalised with malaria or fever</b>	0•0(0/73)	0•0(0/83)	NA	NA	NA	NA
<b>Toxocara canis IgG4 +ve</b>	22•0(13/59)	19•6(9/46)	0•86(0•29,2•46)	0•813	0•90(0•31,2•64)	0•854
<b>Toxoplasma gondii IgG +ve</b>	6•8(4/59)	2•2(1/46)	0•31(0•01,3•26)	0•383	0•57(0•05,6•20)	0•647
<b>Taenia solium +ve</b>	NA	NA	NA	NA	NA	NA
<b>Onchocerca volvulus +ve</b>	NA	NA	NA	NA	NA	NA
<b>HIV +ve</b>	12•1(7/58)	4•3(2/46)	0•33(0•03,1•88)	0•293	0•28(0•05,1•68)	0•163

\* OR children adjusted for: age, sex, maternal education, maternal marital status and employment of either parent; † Fisher's exact test for unadjusted p-values  
N=73 controls and N=83 cases, including 17 cases not identified as part of the three stage survey

**Supplementary Table 3b: Risk factors for ACE in adults by country (Agincourt)\***

	Controls (n/N, %)	Cases (n/N, %)	Unadjusted OR (95% CI)	p value†	Adjusted OR (95% CI)	p value
<b>Seizures in the family</b>	3•2(6/187)	13•7(28/204)	4•80(1•88,14•48)	0•0002	6•71(2•52,17•83)	0•0001
<b>Maternal seizures</b>	0•0(0/187)	0•5(1/204)	NA	1	NA	NA
<b>Abnormal delivery</b>	0•0(0/103)	6•0(11/184)	NA	0•009	NA	NA
<b>Home delivery</b>	45•2(47/104)	47•2(83/176)	1•08(0•65,1•81)	0•805	0•72(0•37,1•38)	0•319
<b>Problems after birth</b>	1•0(1/104)	4•4(8/182)	4•74(0•62,212•10)	0•163	9•05(1•00,81•98)	0•050
<b>Head injury</b>	1•6(3/188)	1•9(4/209)	1•20(0•20,8•32)	1	0•61(0•12,3•04)	0•545
<b>Drinks alcohol</b>	15•8(29/183)	16•3(33/203)	1•03(0•58,1•85)	1	0•75(0•40,1•40)	0•365
<b>Eats cassava</b>	62•0(116/187)	73•4(149/203)	1•69(1•08,2•66)	0•017	2•10(1•30,3•40)	0•002
<b>Eats Pork</b>	31•0(58/187)	22•7(46/203)	0•65(0•40,1•05)	0•067	0•65(0•40,1•08)	0•097
<b>Uses drugs</b>	3•3(6/183)	3•0(6/201)	0•91(0•24,3•46)	1	0•45(0•13,1•62)	0•222
<b>Hypertension</b>	7•0(13/187)	11•3(23/204)	1•70(0•80,3•77)	0•163	3•45(1•50,7•92)	0•004
<b>Stroke</b>	2•7(5/187)	4•9(10/204)	1•88(0•57,7•12)	0•299	2•18(0•65,7•26)	0•204
<b>Diabetes mellitus</b>	1•1(2/187)	3•4(7/204)	3•29(0•61,32•73)	0•178	3•28(0•61,17•59)	0•166
<b>Malnourished</b>	12•3(23/187)	14•4(26/180)	1•20(0•63,2•31)	0•646	0•92(0•47,1•77)	0•793
<b>Dogs in household</b>	21•9(41/187)	23•0(47/204)	1•07(0•64,1•77)	0•810	1•26(0•74,2•14)	0•387
<b>Cats in household</b>	8•6(16/186)	5•9(12/204)	0•66(0•28,1•55)	0•331	0•88(0•38,2•01)	0•758
<b>Malaria IgG +ve (schizont)</b>	37•5(57/152)	43•7(66/151)	1•29(0•80,2•10)	0•294	1•44(0•85,2•44)	0•180
<b>Hospitalised with malaria or fever</b>	0•0(0/188)	0•5(1/209)	NA	1	NA	NA
<b>Toxocara canis IgG4 +ve</b>	7•9(12/152)	9•9(15/151)	1•29(0•54,3•13)	0•553	1•61(0•64,4•02)	0•312
<b>Toxoplasma gondii IgG +ve</b>	11•2(17/152)	15•9(24/151)	1•50(0•73,3•12)	0•244	1•50(0•70,3•20)	0•293
<b>Taenia solium +ve</b>	NA	NA	NA	NA	NA	NA
<b>Onchocerca volvulus +ve</b>	NA	NA	NA	NA	NA	NA
<b>HIV +ve</b>	28•0(42/150)	22•5(34/151)	0•75(0•43,1•30)	0•291	0•69(0•37,1•28)	0•237

\* OR adults adjusted for: age, sex, education, marital status and employment; † Fisher's exact test for unadjusted p-values  
N=188 controls and N=209 cases, including 30 cases not identified as part of the three stage survey

**Supplementary Table 4a: Risk factors for ACE in children by country (Ifakara) \***

	Controls (n/N, %)	Cases (n/N, %)	Unadjusted OR (95% CI)	p value†	Adjusted OR (95% CI)	p value
<b>Seizures in the family</b>	10•5(36/343)	14•7(32/218)	1•47(0•85,2•52)	0•146	1•45(0•86,2•46)	0•161
<b>Maternal seizures</b>	1•2(4/344)	2•8(6/218)	2•41(0•56,11•71)	0•197	2•78(0•69,11•24)	0•152
<b>Abnormal delivery</b>	4•1(14/341)	3•2(7/217)	0•78(0•26,2•10)	0•655	0•76(0•30,1•94)	0•564
<b>Abnormal antenatal period</b>	2•3(8/341)	7•4(16/215)	3•35(1•32,9•18)	0•005	3•84(1•52,9•71)	0•004
<b>Home delivery</b>	36•7(121/330)	35•3(76/215)	0•94(0•65,1•37)	0•785	0•90(0•62,1•30)	0•557
<b>Problems after birth</b>	2•6(9/340)	8•8(19/216)	3•55(1•49,9•06)	0•002	3•73(1•59,8•76)	0•003
<b>Difficulties feeding, crying or breathing</b>	0•9(3/338)	10•3(22/213)	12•86(3•78,67•70)	<0•0001	13•29(3•79,46•62)	<0•0001
<b>Head injury</b>	0•6(2/341)	2•8(6/215)	4•87(0•86,49•59)	0•06	4•25(0•84,21•44)	0•079
<b>Malnourished</b>	15•5(50/322)	20•4(42/206)	1•39(0•86,2•25)	0•159	1•48(0•92,2•38)	0•108
<b>Eats cassava</b>	49•9(171/343)	57•3(125/218)	1•38(0•96,1•97)	0•069	1•23(0•87,1•75)	0•240
<b>Dogs in household</b>	84•3(290/344)	84•4(184/218)	1•01(0•62,1•66)	1	1•06(0•65,1•71)	0•826
<b>Cats in household</b>	87•7(300/342)	94•5(205/217)	2•39(1•20,5•11)	0•008	2•53(1•29,4•97)	0•007
<b>Eats Pork</b>	66•1(226/342)	59•6(130/218)	0•76(0•53,1•09)	0•127	0•73(0•51,1•05)	0•093
<b>Malaria IgG +ve (schizont)</b>	90•1(154/171)	95•6(153/160)	2•41(0•92,7•07)	0•058	1•71(0•63,4•61)	0•289
<b>Hospitalised with malaria or fever</b>	3•5(12/347)	8•2(18/220)	2•49(1•11,5•78)	0•020	2•74(1•23,6•10)	0•013
<b>Toxocara canis IgG4 +ve</b>	43•7(31/71)	55•1(43/78)	1•59(0•79,3•19)	0•191	1•60(0•78,3•28)	0•199
<b>Toxoplasma gondii IgG +ve</b>	31•3(50/160)	42•1(64/152)	1•60(0•98,2•62)	0•060	1•50(0•91,2•46)	0•111
<b>Taenia solium +ve</b>	0•0(0/172)	1•3(2/158)	NA	0•228	NA	NA
<b>Onchocerca volvulus +ve</b>	21•1(36/171)	21•3(34/160)	1•01(0•58,1•78)	1	1•04(0•60,1•81)	0•882
<b>HIV +ve</b>	8•2(14/171)	13•8(22/160)	1•79(0•84,3•93)	0•114	1•86(0•88,3•91)	0•102

\* OR children adjusted for: age, sex, maternal education, maternal marital status and employment of either parent; † Fisher's exact test for unadjusted p-values  
N=347 controls and N=220 cases, including 44 cases not identified as part of the three stage survey

**Supplementary Table 4b: Risk factors for ACE in adults by country (Ifakara)\***

	Controls (n/N, %)	Cases (n/N, %)	Unadjusted OR (95% CI)	p value†	Adjusted OR (95% CI)	p value
<b>Seizures in the family</b>	11•7(32/273)	28•4(64/225)	2•99(1•83,4•95)	<0•0001	3•20(1•91,5•37)	<0•0001
<b>Maternal seizures</b>	0•4(1/277)	2•2(5/230)	6•13(0•68,291•07)	0•096	5•28(0•56,50•17)	0•147
<b>Abnormal delivery</b>	6•8(19/278)	3•5(8/230)	0•49(0•18,1•20)	0•113	0•51(0•20,1•30)	0•158
<b>Home delivery</b>	55•9(124/222)	66•5(135/203)	1•57(1•04,2•37)	0•029	1•61(1•01,2•56)	0•044
<b>Problems after birth</b>	1•1(3/275)	2•6(6/229)	2•44(0•51,15•22)	0•312	2•09(0•48,9•07)	0•327
<b>Head injury</b>	0•4(1/278)	2•2(5/230)	6•16(0•68,292•12)	0•096	13•95(1•21,161•28)	0•035
<b>Drinks alcohol</b>	21•9(59/269)	19•2(41/214)	0•84(0•52,1•35)	0•498	1•08(0•63,1•83)	0•787
<b>Eats cassava</b>	52•9(147/278)	66•7(152/228)	1•78(1•22,2•60)	0•002	1•96(1•30,2•94)	0•001
<b>Eats Pork</b>	62•1(169/272)	70•9(163/230)	1•48(1•00,2•20)	0•047	1•52(1•00,2•32)	0•050
<b>Uses drugs</b>	5•1(14/272)	3•7(8/217)	0•71(0•25,1•84)	0•514	1•07(0•40,2•87)	0•898
<b>Hypertension</b>	0•0(0/274)	0•9(2/218)	NA	0•196	NA	NA
<b>Stroke</b>	0•0(0/273)	0•5(1/219)	NA	0•445	NA	NA
<b>Diabetes mellitus</b>	0•0(0/277)	0•5(1/219)	NA	0•442	NA	NA
<b>Malnourished</b>	10•2(28/274)	16•4(37/225)	1•73(0•99,3•04)	0•045	2•07(1•13,3•80)	0•019
<b>Dogs in household</b>	82•7(230/278)	81•7(187/229)	0•93(0•57,1•51)	0•816	1•06(0•64,1•76)	0•828
<b>Cats in household</b>	89•9(250/278)	90•4(207/229)	1•05(0•56,2•00)	0•882	1•35(0•70,2•63)	0•374
<b>Malaria IgG +ve (schizont)</b>	98•3(171/174)	97•7(173/177)	0•76(0•11,4•56)	1	0•86(0•15,4•97)	0•867
<b>Hospitalised with malaria or fever</b>	1•1(3/278)	3•9(9/230)	3•73(0•92,21•64)	0•043	3•51(0•84,14•59)	0•085
<b>Toxocara canis IgG4 +ve</b>	58•5(48/82)	79•4(85/107)	2•74(1•37,5•49)	0•002	2•43(1•16,5•08)	0•018
<b>Toxoplasma gondii IgG +ve</b>	53•4(87/163)	56•1(92/164)	1•12(0•71,1•77)	0•657	1•10(0•66,1•86)	0•710
<b>Taenia solium +ve</b>	0•6(1/174)	3•4(6/176)	6•11(0•73,282•40)	0•121	10•12(1•13,90•89)	0•039
<b>Onchocerca volvulus +ve</b>	37•9(66/174)	54•2(96/177)	1•94(1•24,3•04)	0•003	1•87(1•15,3•05)	0•012
<b>HIV +ve</b>	17•2(30/174)	20•9(37/177)	1•27(0•72,2•25)	0•417	1•12(0•61,2•05)	0•716

\*OR adults adjusted for: age, sex, education, marital status and employment; † Fisher's exact test for unadjusted p-values  
N=278 controls and N=230 cases, including 40 cases not identified as part of the three stage survey



**Supplementary Table 5a: Risk factors for ACE in children by country (Iganga-Mayuge) \***

	Controls (n/N, %)	Cases (n/N, %)	Unadjusted OR (95% CI)	p value†	Adjusted OR (95% CI)	p value
<b>Seizures in the family</b>	8•4(13/154)	23•1(40/173)	3•26(1•62,6•93)	0•0003	2•99(1•51,5•91)	0•002
<b>Maternal seizures</b>	0•6(1/155)	2•9(5/170)	4•67(0•51,222•09)	0•217	3•93(0•42,36•94)	0•231
<b>Abnormal delivery</b>	1•3(2/150)	3•5(6/172)	2•67(0•47,27•41)	0•292	3•60(0•69,18•91)	0•129
<b>Abnormal antenatal period</b>	1•3(2/151)	8•2(14/171)	6•64(1•48,60•93)	0•004	15•45(1•98,120•67)	0•009
<b>Home delivery</b>	12•4(19/153)	28•9(50/173)	2•87(1•55,5•43)	0•0004	2•90(1•55,5•43)	0•0009
<b>Problems after birth</b>	2•6(4/152)	5•8(10/172)	2•28(0•64,10•17)	0•182	2•98(0•88,10•07)	0•078
<b>Difficulties feeding, crying or breathing</b>	0•7(1/151)	6•6(11/166)	10•65(1•51,461•11)	0•006	11•12(1•39,88•86)	0•023
<b>Head injury</b>	0•7(1/153)	3•5(6/170)	5•56(0•66,257•40)	0•125	3•78(0•42,34•03)	0•236
<b>Malnourished</b>	23•7(31/131)	21•3(32/150)	0•87(0•48,1•60)	0•669	0•82(0•45,1•49)	0•507
<b>Eats cassava</b>	91•0(141/155)	92•5(160/173)	1•22(0•51,2•93)	0•689	1•19(0•48,2•91)	0•707
<b>Dogs in household</b>	16•1(25/155)	6•9(12/173)	0•39(0•17,0•84)	0•014	0•42(0•20,0•88)	0•022
<b>Cats in household</b>	3•9(6/155)	1•7(3/173)	0•44(0•07,2•10)	0•316	0•46(0•11,1•98)	0•298
<b>Eats Pork</b>	10•4(16/154)	12•9(22/171)	1•27(0•61,2•71)	0•605	1•28(0•60,2•73)	0•515
<b>Malaria IgG +ve (schizont)</b>	99•2(125/126)	100•0(91/91)	NA	1	NA	NA
<b>Hospitalised with malaria or fever</b>	0•6(1/155)	0•0(0/173)	NA	0•473	NA	NA
<b>Toxocara canis IgG4 +ve</b>	18•3(23/126)	18•7(17/91)	1•03(0•48,2•17)	1	1•18(0•55,2•57)	0•669
<b>Toxoplasma gondii IgG +ve</b>	19•8(25/126)	22•0(20/91)	1•14(0•55,2•32)	0•736	0•92(0•44,1•92)	0•831
<b>Taenia solium +ve</b>	1•6(2/126)	1•1(1/91)	0•69(0•01,13•44)	1	1•50(0•07,33•68)	0•798
<b>Onchocerca volvulus +ve</b>	4•8(6/126)	12•1(11/91)	2•75(0•89,9•39)	0•071	2•93(1•00,8•57)	0•049
<b>HIV +ve</b>	2•4(3/126)	3•3(3/91)	1•40(0•18,10•66)	0•697	1•06(0•17,6•79)	0•950

\* OR children adjusted for: age, sex, maternal education, maternal marital status and employment of either parent; † Fisher's exact test for unadjusted p-values  
N=155 controls and N=173 cases, including 55 cases not identified as part of the three stage survey

**Supplementary Table 5b: Risk factors for ACE in adults by country (Iganga-Mayuge)\***

	Controls (n/N, %)	Cases (n/N, %)	Unadjusted OR (95% CI)	p value†	Adjusted OR (95% CI)	p value
<b>Seizures in the family</b>	10•8(9/83)	32•8(20/61)	4•01(1•56,10•87)	0•002	5•19(1•49,18•16)	0•010
<b>Maternal seizures</b>	0•0(0/84)	1•6(1/61)	NA	0•421	NA	NA
<b>Abnormal delivery</b>	2•4(2/83)	1•7(1/60)	0•69(0•01,13•51)	1	1•67(0•08,35•63)	0•741
<b>Home delivery</b>	42•7(35/82)	31•1(19/61)	0•61(0•28,1•29)	0•168	0•49(0•16,1•48)	0•207
<b>Problems after birth</b>	0•0(0/79)	7•3(4/55)	NA	0•027	NA	NA
<b>Head injury</b>	0•0(0/84)	0•0(0/62)	NA	NA	NA	NA
<b>Drinks alcohol</b>	11•6(8/69)	15•4(8/52)	1•39(0•42,4•59)	0•595	3•21(0•69,15•01)	0•138
<b>Eats cassava</b>	92•8(77/83)	100•0(61/61)	•(1•21,•)	0•039	1•00(1•00,1•00)	
<b>Eats Pork</b>	11•0(9/82)	19•4(12/62)	1•95(0•69,5•63)	0•233	1•55(0•41,5•84)	0•519
<b>Uses drugs</b>	30•0(21/70)	20•4(11/54)	0•60(0•23,1•48)	0•301	0•66(0•22,1•93)	0•449
<b>Hypertension</b>	1•2(1/83)	1•6(1/62)	1•34(0•02,106•78)	1	NA	NA
<b>Stroke</b>	0•0(0/83)	1•6(1/62)	NA	0•428	NA	NA
<b>Diabetes mellitus</b>	0•0(0/83)	0•0(0/62)	NA	NA	NA	NA
<b>Malnourished</b>	12•3(9/73)	31•1(19/61)	3•22(1•23,8•81)	0•01	2•41(0•70,8•32)	0•163
<b>Dogs in household</b>	13•4(11/82)	9•7(6/62)	0•69(0•20,2•19)	0•606	1•68(0•34,8•17)	0•522
<b>Cats in household</b>	2•4(2/82)	1•6(1/62)	0•66(0•01,12•90)	1	4•45(0•28,70•53)	0•29
<b>Malaria IgG +ve (schizont)</b>	100•0(73/73)	100•0(40/40)	NA	NA	NA	NA
<b>Hospitalised with malaria or fever</b>	0•0(0/84)	1•6(1/62)	NA	0•425	NA	NA
<b>Toxocara canis IgG4 +ve</b>	35•6(26/73)	45•0(18/40)	1•48(0•62,3•49)	0•420	1•77(0•58,5•41)	0•315
<b>Toxoplasma gondii IgG +ve</b>	41•1(30/73)	35•0(14/40)	0•77(0•32,1•84)	0•552	0•99(0•31,3•13)	0•985
<b>Taenia solium +ve</b>	0•0(0/73)	2•5(1/40)	NA	0•354	NA	NA
<b>Onchocerca volvulus +ve</b>	8•2(6/73)	5•0(2/40)	0•59(0•06,3•51)	0•710	0•32(0•03,3•98)	0•377
<b>HIV +ve</b>	2•7(2/73)	5•0(2/40)	1•87(0•13,26•56)	0•614	57•15(2•28,1431•47)	0•014

\* OR adults adjusted for: age, sex, education, marital status and employment; † Fisher's exact test for unadjusted p-values  
N=84 controls and N=62 cases, including 28 cases not identified as part of the three stage survey

**Supplementary Table 6a: Risk factors for ACE in children by country (Kilifi)\***

	Controls (n/N, %)	Cases (n/N, %)	Unadjusted OR (95% CI)	p value†	Adjusted OR (95% CI)	p value
<b>Seizures in the family</b>	15•6(45/288)	16•7(70/418)	1•09(0•71,1•68)	0•756	1•00(0•65,1•53)	0•992
<b>Maternal seizures</b>	1•0(3/289)	2•4(10/418)	2•34(0•59,13•31)	0•258	1•88(0•50,7•05)	0•349
<b>Abnormal delivery</b>	3•5(10/286)	6•0(25/417)	1•76(0•80,4•17)	0•159	1•90(0•86,4•23)	0•115
<b>Abnormal antenatal period</b>	12•3(35/285)	21•3(87/408)	1•94(1•24,3•06)	0•002	1•88(1•20,2•93)	0•006
<b>Home delivery</b>	84•4(243/288)	84•2(352/418)	0•99(0•64,1•52)	1	0•89(0•56,1•40)	0•609
<b>Problems after birth</b>	5•9(17/288)	13•8(57/414)	2•55(1•42,4•77)	0•0007	2•15(1•20,3•86)	0•010
<b>Difficulties feeding, crying or breathing</b>	2•8(8/285)	8•3(34/408)	3•15(1•40,7•98)	0•003	2•60(1•17,5•79)	0•019
<b>Head injury</b>	3•5(10/288)	8•6(36/419)	2•61(1•24,6•00)	0•008	2•44(1•14,5•21)	0•021
<b>Malnourished</b>	24•5(67/274)	25•5(100/392)	1•06(0•73,1•54)	0•786	1•11(0•76,1•63)	0•597
<b>Eats cassava</b>	80•3(232/289)	80•9(338/418)	1•04(0•70,1•54)	0•847	0•92(0•60,1•41)	0•707
<b>Dogs in household</b>	36•5(105/288)	33•8(142/420)	0•89(0•64,1•23)	0•471	0•90(0•65,1•26)	0•548
<b>Cats in household</b>	46•5(134/288)	54•8(229/418)	1•39(1•02,1•90)	0•032	1•37(0•99,1•89)	0•054
<b>Eats Pork</b>	16•1(46/285)	17•4(71/409)	1•09(0•71,1•68)	0•757	1•00(0•65,1•53)	0•990
<b>Malaria IgG +ve (schizont)</b>	60•6(83/137)	59•7(92/154)	0•97(0•59,1•59)	0•905	0•86(0•50,1•46)	0•574
<b>Hospitalised with malaria or fever</b>	4•2(12/289)	9•0(38/423)	2•28(1•14,4•87)	0•016	2•19(1•09,4•41)	0•028
<b>Toxocara canis IgG4 +ve</b>	29•2(40/137)	33•1(51/154)	1•20(0•71,2•04)	0•527	1•27(0•75,2•17)	0•375
<b>Toxoplasma gondii IgG +ve</b>	15•3(21/137)	22•1(34/154)	1•57(0•83,3•01)	0•177	1•74(0•90,3•39)	0•101
<b>Taenia solium +ve</b>	NA	NA	NA	NA	NA	NA
<b>Onchocerca volvulus +ve</b>	NA	NA	NA	NA	NA	NA
<b>HIV +ve</b>	1•5(2/134)	6•0(9/150)	4•21(0•85,40•59)	0•065	4•30(0•82,22•43)	0•084

\* OR children adjusted for: age, sex, maternal education, maternal marital status and employment of either parent; † Fisher's exact test for unadjusted p-values  
N=289 controls and N=423 case, including 40 cases not identified as part of the three stage survey

**Supplementary Table 6b: Risk factors for ACE in adults by country (Kilifi)\***

	Controls (n/N, %)	Cases (n/N, %)	Unadjusted OR (95% CI)	p value†	Adjusted OR (95% CI)	p value
<b>Seizures in the family</b>	13•5(32/237)	17•2(59/343)	1•33(0•82,2•20)	0•247	1•25(0•76,2•06)	0•384
<b>Maternal seizures</b>	0•8(2/237)	2•9(10/343)	3•53(0•74,33•35)	0•135	3•02(0•61,14•86)	0•174
<b>Abnormal delivery</b>	0•0(0/236)	3•0(10/337)	NA	0•007	NA	NA
<b>Home delivery</b>	83•2(198/238)	81•2(281/346)	0•87(0•55,1•38)	0•584	1•01(0•62,1•65)	0•969
<b>Problems after birth</b>	1•3(3/237)	4•8(16/332)	3•95(1•11,21•35)	0•03	3•00(0•77,11•64)	0•113
<b>Head injury</b>	2•5(6/238)	5•8(20/346)	2•37(0•90,7•32)	0•068	2•57(0•94,7•02)	0•066
<b>Drinks alcohol</b>	23•6(55/233)	12•9(44/342)	0•48(0•30,0•76)	0•001	0•55(0•33,0•92)	0•023
<b>Eats cassava</b>	91•9(217/236)	84•3(291/345)	0•47(0•26,0•84)	0•007	0•43(0•24,0•80)	0•008
<b>Eats Pork</b>	34•2(81/237)	26•8(92/343)	0•71(0•49,1•03)	0•065	0•74(0•50,1•10)	0•138
<b>Uses drugs</b>	12•1(28/232)	11•7(40/342)	0•96(0•56,1•68)	0•896	1•44(0•81,2•55)	0•217
<b>Hypertension</b>	0•8(2/237)	2•3(8/344)	2•80(0•55,27•23)	0•212	4•61(0•91,23•47)	0•065
<b>Stroke</b>	0•0(0/237)	0•6(2/345)	NA	0•516	NA	NA
<b>Diabetes mellitus</b>	0•0(0/237)	0•0(0/346)	NA	NA	NA	NA
<b>Malnourished</b>	14•2(33/232)	15•8(54/341)	1•13(0•69,1•88)	0•637	1•02(0•61,1•71)	0•947
<b>Dogs in household</b>	35•3(84/238)	27•2(94/345)	0•69(0•47,1•00)	0•044	0•69(0•47,1•02)	0•061
<b>Cats in household</b>	52•9(126/238)	53•2(184/346)	1•01(0•72,1•42)	1	0•96(0•67,1•37)	0•804
<b>Malaria IgG +ve (schizont)</b>	93•0(120/129)	93•2(136/146)	1•02(0•35,2•90)	1	1•27(0•44,3•62)	0•659
<b>Hospitalised with malaria or fever</b>	2•9(7/238)	5•5(19/346)	1•92(0•76,5•48)	0•158	1•95(0•74,5•14)	0•177
<b>Toxocara canis IgG4 +ve</b>	29•5(38/129)	49•3(72/146)	2•33(1•38,3•96)	0•0009	1•76(1•01,3•06)	0•044
<b>Toxoplasma gondii IgG +ve</b>	42•6(55/129)	45•9(67/146)	1•14(0•69,1•89)	0•628	1•40(0•82,2•40)	0•218
<b>Taenia solium +ve</b>	NA	NA	NA	NA	NA	NA
<b>Onchocerca volvulus +ve</b>	NA	NA	NA	NA	NA	NA
<b>HIV +ve</b>	3•2(4/126)	7•8(11/141)	2•58(0•74,11•37)	0•117	3•51(1•01,12•25)	0•049

\*OR adults adjusted for: age, sex, education, marital status and employment; † Fisher's exact test for unadjusted p-values  
N=238 controls N=346 cases, including 30 cases not identified as part of the three stage survey

**Supplementary Table 7a: Risk factors for ACE in children by country (Kintampo) \***

	<b>Controls (n/N, %)</b>	<b>Cases (n/N, %)</b>	<b>Unadjusted OR (95% CI)</b>	<b>p value†</b>	<b>Adjusted OR (95% CI)</b>	<b>p value</b>
<b>Seizures in the family</b>	14•0(24/172)	30•8(44/143)	2•74(1•52,5•02)	0•0003	3•31(1•83,5•96)	<0•0001
<b>Maternal seizures</b>	0•6(1/172)	1•4(2/144)	2•41(0•12,142•89)	0•593	2•92(0•26,32•81)	0•386
<b>Abnormal delivery</b>	3•7(6/164)	9•2(13/141)	2•67(0•91,8•80)	0•057	2•99(1•07,8•34)	0•036
<b>Abnormal antenatal period</b>	11•5(19/165)	17•8(24/135)	1•66(0•83,3•38)	0•138	1•87(0•94,3•75)	0•075
<b>Home delivery</b>	71•3(119/167)	79•6(113/142)	1•57(0•90,2•77)	0•113	1•47(0•85,2•55)	0•173
<b>Problems after birth</b>	2•4(4/164)	7•7(11/142)	3•36(0•96,14•75)	0•036	3•51(1•02,12•06)	0•047
<b>Difficulties feeding, crying or breathing</b>	0•6(1/164)	31•6(43/136)	75•37(12•27,3062•68)	<0•0001	73•04(9•81,544•07)	<0•0001
<b>Head injury</b>	18•7(32/171)	25•0(36/144)	1•45(0•82,2•57)	0•216	1•45(0•82,2•54)	0•200
<b>Malnourished</b>	20•8(32/154)	12•5(15/120)	0•54(0•26,1•11)	0•077	0•56(0•28,1•12)	0•102
<b>Eats cassava</b>	100•0(170/170)	96•5(138/143)	0•00(0•00,0•63)	0•019	1•00(1•00,1•00)	
<b>Dogs in household</b>	48•3(83/172)	47•6(68/143)	0•97(0•61,1•55)	0•910	0•93(0•58,1•50)	0•777
<b>Cats in household</b>	33•1(57/172)	34•3(49/143)	1•05(0•64,1•73)	0•905	0•97(0•59,1•58)	0•896
<b>Eats Pork</b>	51•2(88/172)	53•8(77/143)	1•11(0•70,1•78)	0•652	1•12(0•70,1•78)	0•646
<b>Malaria IgG +ve (schizont)</b>	99•1(116/117)	100•0(93/93)	NA	1	NA	NA
<b>Hospitalised with malaria or fever</b>	0•0(0/173)	0•0(0/145)	NA	NA	NA	NA
<b>Toxocara canis IgG4 +ve</b>	13•7(16/117)	14•0(13/93)	1•03(0•43,2•42)	1	0•97(0•42,2•24)	0•935
<b>Toxoplasma gondii IgG +ve</b>	42•7(50/117)	51•6(48/93)	1•43(0•80,2•56)	0•213	1•06(0•58,1•94)	0•852
<b>Taenia solium +ve</b>	6•9(8/116)	4•3(4/93)	0•61(0•13,2•36)	0•554	0•40(0•10,1•66)	0•207
<b>Onchocerca volvulus +ve</b>	16•2(19/117)	33•3(31/93)	2•58(1•28,5•26)	0•005	2•32(1•12,4•78)	0•023
<b>HIV +ve</b>	20•5(24/117)	25•8(24/93)	1•35(0•67,2•71)	0•410	1•35(0•67,2•73)	0•395

\* OR children adjusted for: age, sex, maternal education, maternal marital status and employment of either parent; † Fisher's exact test for unadjusted p-values  
N=173 controls and N=145 cases, including 57 cases not identified as part of the three stage survey

**Supplementary Table 7b: Risk factors for ACE in adults by country (Kintampo)\***

	<b>Controls (n/N, %)</b>	<b>Cases (n/N, %)</b>	<b>Unadjusted OR (95% CI)</b>	<b>p value†</b>	<b>Adjusted OR (95% CI)</b>	<b>p value</b>
<b>Seizures in the family</b>	13•0(27/207)	24•8(60/242)	2•20(1•30,3•77)	0•002	1•83(1•05,3•20)	0•034
<b>Maternal seizures</b>	0•0(0/207)	0•4(1/243)	NA	1	NA	NA
<b>Abnormal delivery</b>	8•1(16/198)	6•7(16/239)	0•82(0•37,1•80)	0•586	0•82(0•36,1•90)	0•646
<b>Home delivery</b>	85•6(167/195)	86•0(208/242)	1•03(0•57,1•82)	1	1•07(0•58,1•99)	0•824
<b>Problems after birth</b>	3•1(6/196)	18•3(44/240)	7•11(2•92,20•82)	<0•0001	8•74(3•21,23•83)	<0•0001
<b>Head injury</b>	4•3(9/208)	6•1(15/245)	1•44(0•58,3•82)	0•529	1•26(0•49,3•21)	0•633
<b>Drinks alcohol</b>	24•1(49/203)	27•3(66/242)	1•18(0•75,1•85)	0•514	1•51(0•91,2•52)	0•111
<b>Eats cassava</b>	93•2(193/207)	98•0(240/245)	3•48(1•16,12•54)	0•017	3•92(1•14,13•54)	0•031
<b>Eats Pork</b>	41•3(86/208)	49•0(119/243)	1•36(0•92,2•01)	0•108	1•68(1•09,2•58)	0•018
<b>Uses drugs</b>	1•9(4/206)	4•5(11/242)	2•40(0•70,10•50)	0•187	2•80(0•78,10•14)	0•116
<b>Hypertension</b>	2•5(5/202)	0•0(0/243)	0•00(0•00,0•63)	0•019	NA	NA
<b>Stroke</b>	0•0(0/202)	0•0(0/243)	NA	NA	NA	NA
<b>Diabetes mellitus</b>	0•5(1/201)	0•0(0/243)	0•00(0•00,•)	0•453	NA	NA
<b>Malnourished</b>	17•5(34/194)	18•6(41/221)	1•07(0•63,1•83)	0•800	0•97(0•53,1•77)	0•923
<b>Dogs in household</b>	49•5(103/208)	43•9(107/244)	0•80(0•54,1•17)	0•256	0•90(0•59,1•37)	0•616
<b>Cats in household</b>	30•3(63/208)	36•1(88/244)	1•30(0•86,1•97)	0•230	1•28(0•82,2•00)	0•275
<b>Malaria IgG +ve (schizont)</b>	100•0(175/175)	99•5(187/188)	0•00(0•00,•)	1	NA	NA
<b>Hospitalised with malaria or fever</b>	0•0(0/208)	0•0(0/245)	NA	NA	NA	NA
<b>Toxocara canis IgG4 +ve</b>	20•6(36/175)	24•5(46/188)	1•25(0•74,2•12)	0•383	1•26(0•72,2•21)	0•411
<b>Toxoplasma gondii IgG +ve</b>	67•4(118/175)	81•9(154/188)	2•19(1•31,3•68)	0•002	1•99(1•15,3•45)	0•014
<b>Taenia solium +ve</b>	4•0(7/174)	3•7(7/188)	0•92(0•27,3•15)	1	0•83(0•24,2•93)	0•774
<b>Onchocerca volvulus +ve</b>	32•0(56/175)	50•5(95/188)	2•17(1•39,3•41)	0•0004	2•09(1•29,3•40)	0•003
<b>HIV +ve</b>	30•9(54/175)	29•3(55/188)	0•93(0•58,1•49)	0•819	0•76(0•45,1•28)	0•303

\*OR adults adjusted for: age, sex, education, marital status and employment; † Fisher's exact test for unadjusted p-values  
N=208 controls and N=245 cases, including 84 cases not identified as part of the three stage survey

**Supplementary Table 8: Prevalence of risk factors among children by country**

	<b>Agincourt</b>		<b>Ifakara</b>		<b>Iganga-Mayuge</b>		<b>Kilifi</b>		<b>Kintampo</b>	
	<b>% Control</b>	<b>% Case</b>	<b>% Control</b>	<b>% Case</b>	<b>% Control</b>	<b>% Case</b>	<b>% Control</b>	<b>% Case</b>	<b>% Control</b>	<b>% Case</b>
	<b>(N=261)</b>	<b>(N=245)</b>	<b>(N=625)</b>	<b>(N=366)</b>	<b>(N=239)</b>	<b>(N=152)</b>	<b>(N=527)</b>	<b>(N=699)</b>	<b>(N=381)</b>	<b>(N=249)</b>
<b>Seizures in the family</b>	7	14	10	15	8	22	16	16	14	33
<b>Maternal seizures</b>	0	3	1	3	1	3	1	2	1	2
<b>Abnormal delivery</b>	11	10	4	3	1	3	3	6	4	9
<b>Abnormal antenatal period</b>	3	8	2	7	1	9	12	21	12	15
<b>Home delivery</b>	13	20	36	38	12	25	84	85	71	78
<b>Problems after birth</b>	1	8	3	9	3	9	6	13	2	6
<b>Difficulties feeding, crying or breathing</b>	5	13	1	12	1	6	3	8	1	39
<b>Head injury</b>	1	3	1	3	1	4	3	9	19	23
<b>Malnourished</b>	21	13	15	20	24	23	24	26	21	12
<b>Eats cassava</b>	51	44	50	59	91	91	80	80	100	97
<b>Dogs in household</b>	14	26	84	84	16	7	36	34	48	45
<b>Cats in household</b>	8	0	88	95	4	1	47	54	33	36
<b>Eats Pork</b>	15	12	66	58	10	16	16	18	51	57
<b>Malaria IgG +ve (schizont)</b>	22	24	90	97	99	100	61	60	99	100
<b>Hospitalised with malaria or fever</b>	0	0	3	6	0	0	4	9	0	0
<b>Toxocara canis IgG4 +ve</b>	22	13	44	56	18	16	29	34	14	14
<b>Toxoplasma gondii IgG +ve</b>	7	0	31	43	20	19	15	20	43	42
<b>Taenia solium +ve</b>	NA	NA	0	2	2	2	NA	NA	7	4
<b>Onchocerca volvulus +ve</b>	NA	NA	21	22	5	12	NA	NA	16	33
<b>HIV +ve</b>	12	8	8	11	2	2	1	7	21	21

**Supplementary Table 9: Prevalence of risk factors among adults by country**

	<b>Agincourt</b>		<b>Ifakara</b>		<b>Iganga-Mayuge</b>		<b>Kilifi</b>		<b>Kintampo</b>	
	<b>% Control</b>	<b>% Case</b>	<b>% Control</b>	<b>% Case</b>	<b>% Control</b>	<b>% Case</b>	<b>% Control</b>	<b>% Case</b>	<b>% Control</b>	<b>% Case</b>
	<b>(N=261)</b>	<b>(N=245)</b>	<b>(N=625)</b>	<b>(N=366)</b>	<b>(N=239)</b>	<b>(N=152)</b>	<b>(N=527)</b>	<b>(N=699)</b>	<b>(N=381)</b>	<b>(N=249)</b>
<b>Seizures in the family</b>	3	13	12	31	11	28	14	17	13	25
<b>Maternal seizures</b>	0	1	0	1	0	3	1	3	0	0
<b>Abnormal delivery</b>	0	4	7	3	3	3	0	3	8	6
<b>Home delivery</b>	45	50	57	67	44	42	83	81	86	85
<b>Problems after birth</b>	1	4	1	3	0	3	1	5	3	20
<b>Head injury</b>	2	1	0	2	0	0	2	6	5	7
<b>Drinks alcohol</b>	16	14	23	22	12	10	24	12	24	27
<b>Eats cassava</b>	62	75	53	66	93	100	92	85	93	98
<b>Eats Pork</b>	31	24	63	71	11	24	34	27	41	49
<b>Uses drugs</b>	3	3	5	3	31	23	12	12	2	5
<b>Hypertension</b>	7	11	0	1	1	0	1	2	2	0
<b>Stroke</b>	3	4	0	1	0	0	0	1	0	0
<b>Diabetes mellitus</b>	1	3	0	1	0	0	0	0	0	0
<b>Malnourished</b>	12	15	10	16	13	36	14	15	18	19
<b>Dogs in household</b>	22	24	83	81	14	6	35	28	50	43
<b>Cats in household</b>	9	6	90	88	3	0	53	53	30	38
<b>Malaria IgG +ve (schizont)</b>	38	45	98	98	100	100	93	93	100	100
<b>Hospitalised with malaria or fever</b>	1	0	1	3	0	3	3	6	0	0
<b>Toxocara canis IgG4 +ve</b>	8	9	62	84	34	38	29	50	21	25
<b>Toxoplasma gondii IgG +ve</b>	11	15	54	56	43	38	43	44	67	84
<b>Taenia solium +ve</b>	NA	NA	1	4	0	4	NA	NA	4	3
<b>Onchocerca volvulus +ve</b>	NA	NA	38	56	9	12	NA	NA	32	52
<b>HIV +ve</b>	28	22	18	21	3	4	3	5	31	28



**Supplementary Table 10: Risk factors for focal epilepsy in adults**

	<b>Controls (n/N, %)</b>	<b>Cases (n/N, %)</b>	<b>Odds ratio (95% CI)*</b>	<b>p value</b>
<b>Seizures in the family</b>	10•7(106/987)	22•6(107/473)	2•70(1•94,3•74)	<0•0001
<b>Maternal seizures</b>	0•3(3/992)	1•1(5/475)	2•74(0•56,13•46)	0•213
<b>Abnormal delivery</b>	4•1(37/898)	3•2(15/465)	1•02(0•51,2•01)	0•959
<b>Home delivery</b>	67•9(571/841)	70•1(312/445)	1•17(0•85,1•60)	0•330
<b>Problems after birth</b>	1•5(13/891)	6•3(29/460)	5•97(2•82,12•65)	<0•0001
<b>Head injury</b>	1•8(18/996)	3•1(15/478)	2•07(0•97,4•41)	0•060
<b>Drinks alcohol</b>	20•9(200/957)	17•0(79/464)	0•90(0•64,1•25)	0•518
<b>Eats cassava</b>	75•7(750/991)	80•0(380/475)	1•62(1•18,2•21)	0•002
<b>Eats Pork</b>	40•9(403/986)	40•2(191/475)	1•00(0•77,1•29)	0•977
<b>Uses drugs</b>	7•6(73/963)	5•6(26/461)	0•99(0•58,1•67)	0•958
<b>Hypertension</b>	2•1(21/983)	3•6(17/470)	1•58(0•75,3•30)	0•227
<b>Stroke</b>	0•5(5/982)	1•3(6/472)	1•75(0•49,6•29)	0•393
<b>Diabetes mellitus</b>	0•3(3/985)	1•1(5/473)	3•26(0•69,15•43)	0•135
<b>Malnourished</b>	13•2(127/960)	18•0(82/456)	1•46(1•04,2•04)	0•027
<b>Dogs in household</b>	47•2(469/993)	39•6(188/475)	0•81(0•61,1•06)	0•130
<b>Cats in household</b>	46•1(457/992)	45•4(216/476)	1•01(0•74,1•38)	0•943
<b>Malaria IgG +ve (schizont)</b>	84•8(596/703)	79•3(264/333)	1•16(0•71,1•91)	0•550
<b>Hospitalised with malaria or fever</b>	1•1(11/996)	2•5(12/478)	1•91(0•79,4•61)	0•152
<b>Toxocara canis IgG4 +ve</b>	26•2(160/611)	34•1(101/296)	1•63(1•10,2•41)	0•015
<b>Toxoplasma gondii IgG +ve</b>	44•4(307/692)	45•4(149/328)	1•55(1•10,2•17)	0•011
<b>Taenia solium +ve</b>	1•9(8/421)	5•3(8/152)	3•80(1•28,11•23)	0•016
<b>Onchocerca volvulus +ve</b>	30•3(128/422)	57•1(88/154)	2•81(1•81,4•37)	<0•0001
<b>HIV +ve</b>	18•9(132/698)	19•9(66/332)	0•93(0•63,1•36)	0•691

\*OR adjusted for age, sex, education, marital status, employment and country

**Supplementary Table 11: Risk factors for focal epilepsy in children**

	<b>Controls (n/N, %)</b>	<b>Cases (n/N, %)</b>	<b>Odds ratio (95% CI)*</b>	<b>p value</b>
<b>Seizures in the family</b>	11•9(122/1028)	17•0(62/364)	1•62(1•13,2•33)	0•008
<b>Maternal seizures</b>	0•9(9/1031)	1•9(7/360)	1•88(0•63,5•61)	0•256
<b>Abnormal delivery</b>	3•9(39/1006)	7•0(25/357)	1•99(1•14,3•47)	0•015
<b>Abnormal antenatal period</b>	6•6(66/1004)	11•6(40/344)	1•64(1•03,2•61)	0•036
<b>Home delivery</b>	50•6(510/1007)	58•9(211/358)	1•07(0•78,1•47)	0•671
<b>Problems after birth</b>	3•5(35/1014)	9•5(34/358)	2•47(1•46,4•16)	0•0007
<b>Difficulties feeding, crying or breathing</b>	1•6(16/1003)	10•4(36/346)	5•78(3•04,10•97)	<0•0001
<b>Head injury</b>	4•5(46/1025)	7•4(27/363)	2•48(1•38,4•45)	0•002
<b>Malnourished</b>	20•4(194/952)	19•0(63/332)	0•98(0•70,1•38)	0•905
<b>Eats cassava</b>	73•0(751/1029)	70•2(254/362)	0•98(0•72,1•33)	0•895
<b>Dogs in household</b>	49•7(512/1031)	47•4(172/363)	1•00(0•74,1•34)	0•974
<b>Cats in household</b>	48•8(502/1029)	55•7(201/361)	1•28(0•93,1•78)	0•131
<b>Eats Pork</b>	37•8(387/1025)	31•3(111/355)	0•88(0•64,1•20)	0•415
<b>Malaria IgG +ve (schizont)</b>	80•5(491/610)	69•5(132/190)	0•79(0•48,1•32)	0•369
<b>Hospitalised with malaria or fever</b>	2•3(24/1036)	6•3(23/365)	2•11(1•13,3•95)	0•020
<b>Toxocara canis IgG4 +ve</b>	24•1(123/510)	34•4(53/154)	1•23(0•79,1•91)	0•365
<b>Toxoplasma gondii IgG +ve</b>	25•0(150/599)	27•6(51/185)	1•25(0•81,1•92)	0•323
<b>Taenia solium +ve</b>	2•4(10/414)	2•0(2/98)	1•97(0•38,10•31)	0•423
<b>Onchocerca volvulus +ve</b>	14•7(61/414)	22•7(22/97)	1•30(0•70,2•41)	0•399
<b>HIV +ve</b>	8•3(50/606)	10•7(20/187)	1•71(0•93,3•15)	0•085

\*OR adjusted for age, sex, education, marital status, employment and country

**Supplementary Table 12: Risk factors for ACE in children after adjustment for a reduced set of confounders (age, sex and country)**

	<b>OR (95% CI) full model</b>	<b>OR (95% CI) reduced model</b>	<b>p value</b>
<b>Seizures in the family</b>	1.72(1.31,2.25)	1.72(1.32,2.25)	<0.0001
<b>Maternal seizures</b>	2.84(1.24,6.49)	2.87(1.27,6.52)	0.011
<b>Abnormal delivery</b>	1.56(0.98,2.47)	1.48(0.95,2.32)	0.085
<b>Abnormal antenatal period</b>	2.15(1.53,3.02)	2.26(1.62,3.16)	<0.0001
<b>Home delivery</b>	1.24(0.97,1.57)	1.25(0.99,1.57)	0.060
<b>Problems after birth</b>	2.77(1.82,4.23)	2.98(1.97,4.52)	<0.0001
<b>Difficulties feeding, crying or breathing</b>	10.23(5.85,17.88)	10.53(6.04,18.34)	<0.0001
<b>Head injury</b>	1.97(1.28,3.03)	2.07(1.36,3.15)	0.0006
<b>Malnourished</b>	1.00(0.78,1.29)	1.00(0.78,1.27)	0.982
<b>Eats cassava</b>	0.99(0.77,1.26)	1.01(0.79,1.28)	0.951
<b>Dogs in household</b>	0.91(0.73,1.15)	0.89(0.72,1.11)	0.313
<b>Cats in household</b>	1.26(0.98,1.62)	1.29(1.02,1.65)	0.036
<b>Eats Pork</b>	0.99(0.79,1.25)	1.00(0.80,1.25)	0.990
<b>Malaria IgG +ve (schizont)</b>	1.14(0.75,1.73)	1.15(0.77,1.71)	0.504
<b>Hospitalised with malaria or fever</b>	2.01(1.17,3.45)	2.08(1.22,3.55)	0.007
<b>Toxocara canis IgG4 +ve</b>	1.19(0.85,1.66)	1.10(0.79,1.52)	0.565
<b>Toxoplasma gondii IgG +ve</b>	1.15(0.85,1.58)	1.20(0.89,1.63)	0.230
<b>Taenia solium +ve</b>	1.09(0.34,3.45)	0.93(0.31,2.80)	0.898
<b>Onchocerca volvulus +ve</b>	1.67(1.09,2.57)	1.58(1.04,2.40)	0.031
<b>HIV +ve</b>	1.28(0.80,2.03)	1.28(0.81,2.03)	0.281

**Supplementary Table 13: Risk factors for ACE in adults after adjustment for a reduced set of confounders (age, sex and country)**

	<b>OR (95% CI) full model</b>	<b>OR (95% CI) reduced model</b>	<b>p value</b>
<b>Seizures in the family</b>	2•30(1•73,3•07)	2•37(1•81,3•10)	<0•0001
<b>Maternal seizures</b>	3•02(0•75,12•14)	3•75(1•01,13•91)	0•049
<b>Abnormal delivery</b>	1•11(0•65,1•89)	1•02(0•63,1•67)	0•927
<b>Home delivery</b>	1•18(0•92,1•53)	1•23(0•97,1•55)	0•089
<b>Problems after birth</b>	6•41(3•28,12•53)	5•73(3•08,10•67)	<0•0001
<b>Head injury</b>	2•29(1•22,4•30)	1•90(1•05,3•45)	0•034
<b>Drinks alcohol</b>	0•88(0•67,1•15)	0•71(0•55,0•92)	0•009
<b>Eats cassava</b>	1•46(1•12,1•91)	1•38(1•08,1•76)	0•010
<b>Eats Pork</b>	1•10(0•89,1•36)	1•02(0•83,1•24)	0•882
<b>Uses drugs</b>	1•21(0•81,1•79)	0•90(0•62,1•31)	0•571
<b>Hypertension</b>	1•74(0•91,3•33)	1•82(0•98,3•36)	0•057
<b>Stroke</b>	1•94(0•61,6•15)	2•54(0•84,7•71)	0•099
<b>Diabetes mellitus</b>	2•48(0•56,10•87)	2•31(0•57,9•44)	0•242
<b>Malnourished</b>	1•25(0•93,1•67)	1•39(1•06,1•81)	0•018
<b>Dogs in household</b>	0•89(0•71,1•12)	0•82(0•67,1•02)	0•073
<b>Cats in household</b>	1•03(0•80,1•32)	1•01(0•80,1•28)	0•922
<b>Malaria IgG +ve (schizont)</b>	1•17(0•75,1•81)	1•16(0•77,1•75)	0•472
<b>Hospitalised with malaria or fever</b>	2•28(1•06,4•92)	2•23(1•07,4•65)	0•032
<b>Toxocara canis IgG4 +ve</b>	1•74(1•27,2•40)	1•86(1•39,2•48)	<0•0001
<b>Toxoplasma gondii IgG +ve</b>	1•39(1•05,1•84)	1•28(0•99,1•66)	0•057
<b>Taenia solium +ve</b>	1•98(0•72,5•43)	1•71(0•66,4•44)	0•270
<b>Onchocerca volvulus +ve</b>	2•23(1•56,3•19)	2•18(1•58,3•01)	<0•0001
<b>HIV +ve</b>	0•85(0•61,1•18)	0•90(0•66,1•22)	0•487