Association between prenatal exposure to indoor residual spraying insecticides and infection rates among South African children participating in the Venda Health Examination of Mothers, Babies and their Environment (VHEMBE) study

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Supplemental Table 1.1 – Maternal peripartum serum DDT/E concentrations by participant characteristic, Venda Health Examination of Mothers, Babies and their Environment (VHEMBE), Limpopo, South Africa

Characteristics	n[a] (%)	*p,p'*-DDE GM[b]	GSD[c]	P-value[d]	*p,p'*-DDT GM[b]	GSD[c]	P-value[d]	*o,p'*-DDT GM[b]	GSD[c]	P-value[d]
Maternal characteristics during pregnancy										
Age (years)				0.6			0.3			0.1
< 25	319 (51)	303.5	4.9		68.4	6.7		9.1	4.5	
25–35	237 (38)	274.8	4.5		69.6	5.7		8.6	4.2	
> 35	73 (12)	322.9	5.1		96.9	9.1		13.0	6.2	
Education				0.7			0.3			0.1
< Grade 12	361 (57)	292.0	4.8		74.3	6.6		9.5	4.8	
Grade 12	183 (29)	331.4	4.8		77.6	6.4		9.5	4.4	
> Grade 12	85 (14)	251.4	4.3		54.2	6.6		7.9	4.3	
Married or living as married				0.2			0.1			0.01*
No	338 (54)	273.4	4.5		64.2	5.9		8.1	4.5	
Yes	291 (46)	327.1	5.0		82.6	6.3		10.9	4.7	
Parity (prior to birth of index child)				0.02*			0.8			0.8

	N (%)			p			p			p
0	268 (43)	361.3	5.2		71.1	7.2		9.3	4.6	
1	173 (28)	241.4	4.6		69.5	5.3		8.7	4.3	
≥ 2	188 (30)	271.9	4.2		76.2	6.9		9.9	5.0	
HIV status				0.8			0.9			0.3
Negative	552 (88)	296.1	4.8		72.4	6.7		9.5	4.6	
Positive	77 (12)	303.4	4.1		70.1	5.6		7.9	4.8	
Energy intake during pregnancy[e]				0.1			0.4			0.5
Insufficient	198 (31)	257.5	4.4		66.7	6.0		8.9	4.3	
Sufficient	431 (69)	317.3	4.9		74.8	6.8		9.5	4.8	
Household poverty[f]				0.9			0.3			0.4
No	246 (39)	291.4	4.5		65.1	6.7		7.0	±.0	
Yes	383 (61)	300.7	4.9		77.0	6.5		9.7	4.9	
Around smokers during pregnancy				0.8			0.8			0.8
No	391 (62)	294.2	4.9		70.6	6.8		9.3	4.6	
Yes	238 (39)	301.6	4.4		74.7	6.1		9.3	4.6	
Alcohol during pregnancy				0.4			0.5			0.4
No	592 (94)	292.1	4.8		70.9	6.5		9.1	4.6	
Yes	37 (6)	385.4	3.8		94.9	7.0		12.6	5.5	

Child household characteristics

	n (%)									
Household size				0.3			0.2			0.4
1–4	159 (25)	298.7	5.1		70.3	6.9		8.3	5.2	
5–8	323 (51)	294.9	4.8		73.6	6.6		9.8	4.7	
9–12	115 (18)	308.8	4.7		72.6	6.7		9.3	4.3	
≥ 13	32 (5)	227.5	3.4		58.0	4.4		9.0	2.7	
Number of people sleeping in same room as child				1.0			0.8			0.6
≤ 2	151 (24)	289.7	5.4		65.2	7.2		8.5	5.5	
3–5	344 (55)	293.2	4.8		73.3	6.8		9.1	4.6	
6–8	112 (18)	357.9	3.7		89.5	5.3		11.5	4.0	
≥ 9	22 (3)	273.9	4.4		66.8	6.3		9.3	4.1	
Number of people who smoke inside child's home				0.3			0.3			0.5
0	572 (91)	292.0	4.8		70.4	6.6		9.2	4.7	
≥ 1	56 (9)	356.8	4.6		93.9	6.3		10.7	4.5	

Child characteristics

Sex				0.1			0.03*			0.01*

	N (%)			p			p			p
Male	322 (51)	266.1	4.7		61.6	6.5		8.0	4.7	
Female	307 (49)	333.6	4.7		85.3	6.6		10.9	4.5	
Birth weight				0.1			0.2			0.2
< 2500 g	47 (7)	214.5	4.3		49.5	4.3		7.1	4.0	
≥ 2500 g	582 (93)	304.9	4.8		74.3	6.8		9.5	4.7	
Premature birth (< 37-week gestation)				0.9			0.5			1.0
No	552 (88)	297.9	4.8		73.6	6.6		9.3	4.7	
Yes	77 (12)	290.4	4.6		62.5	6.7		9.3	4.5	
Method of delivery				0.7			0.7			0.4
Vaginal	481 (76)	301.9	4.7		73.6	6.7		9.6	4.7	
C-section	148 (24)	281.5	4.8		67.4	6.1		8.4	4.4	
Breastfeeding				0.2			0.7			0.9
≤ 18 months	363 (58)	310.6	4.8		70.8	6.6		9.5	4.3	
> 18 months	260 (41)	282.0	4.7		75.5	6.5		9.0	5.2	

Notes:

DDT = dichlorodiphenyltrichloroethane; DDE = dichlorodiphenyldichloroethylene

Totals may not add to 629 due to missing data. Percentages may not add to 100% due to rounding.

[a] n = 629

[b] GM = geometric mean

[c] GSD = geometric standard deviation

[d] P-values calculated using ANOVAs

[e] Energy intake was defined based on U.S. Institute of Medicine guidelines for pregnant women (18) as described by Huang et al. (10).

[f] Household income below the South African mid-2013-year food poverty level of 386 Rand/month/person.

Supplemental Table 1.2 – Maternal peripartum urinary pyrethroid metabolite concentrations by participant characteristic, Venda Health Examination of Mothers, Babies and their Environment (VHEMBE), Limpopo, South Africa

Characteristics	n[a] (%)	cis-DBCA GM[b]	GSD[c]	P-value[d]	cis-DCCA GM[b]	GSD[c]	P-value[d]	trans-DCCA GM[b]	GSD[c]	P-value[d]	3-PBA GM[b]	GSD[c]	P-value[d]
Maternal characteristics during pregnancy													
Age (years)				0.8			0.02*			0.07			0.02*
< 25	319 (51)	0.3	3.0		0.4	2.7		0.5	3.2		1.0	2.4	
25–35	237 (38)	0.3	3.3		0.5	2.3		0.6	2.8		1.2	2.4	
> 35	73 (12)	0.3	2.7		0.6	2.5		0.7	3.2		1.3	2.3	
Education				0.5			0.3			0.1			0.4
< Grade 12	361 (57)	0.4	3.1		0.5	2.6		0.6	3.1		1.1	2.4	
Grade 12	183 (29)	0.3	3.1		0.5	2.5		0.5	3.1		1.1	2.4	
> Grade 12	85 (14)	0.3	2.9		0.4	2.4		0.5	2.6		1.0	2.1	
Married or living as married				0.3			0.04*			0.1			0.06
No	338 (54)	0.3	3.0		0.4	2.5		0.5	2.9		1.0	2.3	
Yes	291 (46)	0.4	3.1		0.5	2.6		0.6	3.1		1.2	2.4	

	N (%)			p			p			p			p
Parity (prior to birth of index child)				0.3			< 0.01*			< 0.01*			< 0.01*
0	268 (43)	0.3	3.0		0.4	2.8		0.5	3.3		1.0	2.5	
1	173 (28)	0.4	3.2		0.5	2.3		0.5	2.7		1.1	2.2	
≥ 2	188 (30)	0.3	3.0		0.6	2.4		0.7	2.9		1.3	±.3	
HIV status				0.5			0.8			0.6			0.03*
Negative	552 (88)	0.3	3.0		0.5	2.5		0.5	3.0		1.1	2.3	
Positive	77 (12)	0.3	3.4		0.5	2.5		0.6	3.1		1.3	2.8	
Energy intake during pregnancy[e]				0.1			0.5			0.9			0.2
Insufficient	198 (31)	0.4	3.3		0.5	2.6		0.6	3.0		1.2	2.3	
Sufficient	431 (69)	0.3	3.0		0.5	2.5		0.5	3.1		1.1	2.4	
Household poverty[f]				0.7			0.7			0.4			0.5
No	246 (39)	0.3	3.0		0.5	2.5		0.5	2.8		1.1	2.3	
Yes	383 (61)	0.3	3.1		0.5	2.6		0.6	3.2		1.1	2.4	
Around smokers during pregnancy				0.5			0.8			0.3			0.8
No	391 (62)	0.3	3.1		0.5	2.5		0.5	3.0		1.1	2.3	

	N (%)			p			p			p			p
Yes	238 (39)	0.3	3.0		0.5	2.6		0.6	3.1		1.1	2.5	
Alcohol during pregnancy				0.6			0.9			0.7			0.7
No	592 (94)	0.3	3.1		0.5	2.6		0.5	3.0		1.1	2.4	
Yes	37 (6)	0.3	2.5		0.5	2.3		0.6	3.0		1.2	2.3	

Child household characteristics

	N (%)			p			p			p			p
Household size				0.8			0.6			0.4			0.7
1–4	156 (25)	0.3	3.1		0.5	2.5		0.6	3.0		1.1	2.4	
5–8	317 (51)	0.3	2.1		0.5	2.7		0.6	3.1		1.1	2.4	
9–12	115 (18)	0.3	2.8		0.4	2.2		0.5	2.7		1.0	2.2	
≥ 13	32 (5)	0.3	3.3		0.4	2.8		0.5	3.7		1.0	2.5	
Number of people sleeping in same room as child				0.5			0.4			0.5			0.3
≤ 2	151 (24)	0.3	3.4		0.5	2.5		0.6	3.1		1.1	2.4	
3–5	344 (55)	0.3	2.9		0.5	2.5		0.5	3.1		1.1	2.4	
6–8	112 (18)	0.3	3.0		0.4	2.2		0.5	2.6		1.0	2.3	
≥ 9	22 (3)	0.4	3.0		0.5	3.0		0.6	3.3		1.2	2.4	
Number of people who smoke inside child's home				0.1			0.3			0.7			0.4

	N (%)			p			p			p			p
0	572 (91)	0.3	3.1		0.5	2.6		0.6	3.1		1.1	2.4	
≥ 1	56 (9)	0.3	2.3		0.4	2.2		0.5	2.6		1.0	2.1	

Child characteristics

	N (%)			p			p			p			p
Sex				0.4			0.6			0.8			0.5
Male	322 (51)	0.3	3.0		0.5	2.5		0.5	3.0		1.1	2.4	
Female	307 (49)	0.3	3.1		0.5	2.6		0.6	3.0		1.1	2.4	
Birth weight				0.2			0.2			0.4			0.1
< 2500 g	47 (7)	0.3	3.4		0.4	1.9		0.5	2.4		0.9	2.2	
≥ 2500 g	582 (93)	0.3	3.0		0.5	2.6		0.6	3.1		1.1	2.4	
Premature birth (< 37-week gestation)				0.9			0.7			0.7			0.8
No	552 (88)	0.3	3.1		0.5	2.6		0.5	3.1		1.1	2.4	
Yes	77 (12)	0.3	3.1		0.5	2.3		0.6	2.8		1.1	2.2	
Method of delivery				0.1			0.2			0.1			0.1
Vaginal	481 (76)	0.4	3.0		0.5	2.6		0.6	3.0		1.1	2.4	
C-section	148 (24)	0.3	3.2		0.4	2.5		0.5	3.0		1.0	2.3	
Breastfeeding				0.7			0.1			0.04*			0.3
≤ 18 months	363 (58)	0.3	3.0		0.5	2.5		0.5	3.1		1.1	2.4	

> 18 months	260 (41)	0.3	3.2		0.5	2.6		0.6	3.0		1.1	2.4

Notes:

cis-DBCA = *cis*-3-(2,2-dibromovinyl)-2,2-dimethyl-cyclopropanecarboxylicacid; *cis*-DCCA = *cis*-3-(2,2-dichlorovinyl)-2,2-dimethyl-cyclopropane carboxylicacid; *trans*-DCCA = *trans*-3-(2,2-dichlorovinyl)-2,2-dimethyl-cyclopropane carboxylicacid; PBA = phenoxybenzoic acid; GM = geometric mean

Totals may not add to 620 due to missing data. Percentages may not add to 100% due to rounding.

[a] n = 620 for *cis*-DBCA, *cis*-DCCA and *trans*-DCCA; n = 619 for 3-PBA

[b] GM = geometric mean

[c] GSD = geometric standard deviation

[d] P-values calculated using ANOVAs

[e] Energy intake was defined based on U.S. Institute of Medicine guidelines for pregnant women (18) as described by Huang et al. (10).

f Household income below the South African mid-2013-year food poverty level of 386 Rand/month/person.

Supplemental 2.1 – Number of child ear infection, diarrhea and persistent diarrhea by participant characteristic among children participating in the Venda Health Examination of Mothers, Babies and their Environment (VHEMBE), Limpopo, South Africa

Characteristics	N (%)	Ear infection					Diarrhea					Persistent diarrhea		
		N (%)				P-value[a]	N (%)				P-value[a]	N (%)		P-value[a]
		0	1	2	≥ 3		0	1	2	≥ 3		No	Yes	
Maternal characteristics during pregnancy														
Age (years)						0.5					0.1			0.5
< 25	319 (51)	262 (82)	36 (11)	11 (3)	8 (3)		262 (82)	36 (11)	11 (3)	8 (3)		262 (82)	36 (11)	
25–35	237 (38)	209 (88)	17 (7)	9 (4)	2 (1)		209 (88)	17 (7)	9 (4)	2 (1)		209 (88)	17 (7)	
> 35	73 (12)	65 (88)	6 (8)	2 (3)	1 (1)		65 (88)	6 (8)	2 (3)	1 (1)		65 (88)	6 (8)	
Education						0.9					0.04*			0.7
< Grade 12	361 (57)	311 (86)	31 (9)	12 (3)	6 (2)		264 (73)	61 (17)	26 (7)	11 (3)		348 (96)	12 (3)	
Grade 12	183 (29)	157 (85)	17 (9)	7 (4)	3 (2)		115 (63)	47 (26)	16 (9)	6 (3)		175 (95)	9 (5)	
> Grade 12	85 (14)	68 (81)	11 (13)	3 (4)	2 (2)		56 (67)	19 (23)	3 (4)	6 (7)		81 (96)	3 (4)	
Married or living as married						0.1					0.02*			0.02*

						p					p			p
No	338 (54)	280 (83)	40 (12)	10 (3)	8 (2)		241 (71)	55 (16)	25 (7)	18 (5)		320 (94)	18 (5)	
Yes	291 (46)	256 (88)	19 (7)	12 (4)	3 (1)		194 (67)	72 (25)	20 (7)	5 (2)		284 (98)	6 (2)	
Parity (prior to birth of index child)						0.5					0.2			0.02*
0	268 (43)	221 (82)	30 (11)	9 (3)	7 (3)		186 (69)	54 (20)	17 (6)	11 (4)		256 (96)	12 (4)	
1	173 (28)	150 (87)	14 (8)	8 (5)	1 (1)		120 (69)	40 (23)	7 (4)	6 (3)		165 (95)	7 (4)	
≥ 2	188 (30)	165 (87)	15 (8)	5 (3)	3 (2)		129 (68)	33 (17)	21 (11)	6 (3)		183 (97)	5 (3)	
HIV status						0.5					0.6			0.2
Negative	552 (88)	466 (95)	55 (10)	19 (3)	9 (2)		377 (68)	115 (21)	40 (7)	19 (3)		532 (97)	19 (3)	
Positive	77 (12)	70 (89)	4 (5)	3 (4)	2 (3)		58 (73)	12 (15)	5 (6)	4 (5)		72 (91)	5 (6)	
Energy intake during pregnancy[b]						0.1					0.8			0.1
Insufficient	198 (31)	165 (83)	17 (9)	8 (4)	7 (4)		136 (68)	38 (19)	16 (8)	9 (5)		193 (97)	4 (2)	
Sufficient	431 (69)	371 (86)	42 (10)	14 (3)	4 (1)		299 (69)	89 (21)	29 (7)	14 (3)		411 (95)	20 (5)	
Household poverty[c]						0.7					0.2			0.5
No	246 (39)	208 (84)	24 (10)	8 (3)	6 (2)		172 (70)	55 (22)	16 (6)	4 (2)		237 (96)	8 (3)	
Yes	383 (61)	328 (86)	35 (9)	14 (4)	5 (1)		263 (69)	72 (19)	29 (8)	19 (5)		367 (96)	16 (4)	

Around smokers					0.3					0.2		0.8
during pregnancy												
No	391 (62)	334 (85)	33 (8)	17 (4)	6 (2)	279 (71)	72 (18)	24 (6)	16 (4)		377 (96)	14 (4)
Yes	238 (39)	202 (85)	26 (11)	5 (2)	5 (2)	156 (65)	55 (23)	21 (9)	7 (3)		227 (95)	10 (4)
Alcohol during					0.6					0.4		0.4
pregnancy												
No	592 (94)	502 (85)	56 (9)	22 (4)	10 (2)	409 (69)	122 (21)	40 (7)	21 (4)		566 (96)	24 (4)
Yes	37 (6)	34 (89)	3 (8)	0 (0)	1 (3)	26 (68)	5 (13)	5 (13)	2 (5)		38 (100)	0 (0)

Child household characteristics

Household size					0.9					0.5		0.5
1–4	159 (25)	132 (83)	18 (11)	7 (4)	1 (1)	106 (67)	41 (26)	9 (6)	3 (2)		153 (96)	6 (4)
5–8	323 (51)	275 (85)	29 (9)	12 (4)	7 (2)	220 (68)	57 (18)	25 (8)	13 (4)		303 (94)	12 (4)
9–12	115 (18)	100 (87)	9 (8)	3 (3)	2 (2)	73 (63)	26 (23)	9 (8)	4 (3)		105 (91)	7 (6)
≥ 13	32 (5)	28 (88)	3 (9)	0 (0)	1 (3)	24 (75)	4 (13)	2 (6)	2 (6)		32 (100)	0 (0)
Number of people					0.7					0.6		0.2
sleeping in same												
room as child												
≤ 2	151 (24)	123 (81)	17 (11)	8 (5)	3 (2)	101 (67)	30 (20)	12 (8)	8 (5)		142 (94)	9 (6)

3–5	344 (55)	248 (86)	26 (9)	9 (3)	4 (1)		198 (69)	66 (23)	17 (6)	6 (2)		274 (96)	12 (4)	
6–8	112 (18)	74 (86)	5 (6)	4 (5)	1 (1)		61 (71)	14 (16)	7 (8)	4 (5)		85 (99)	1 (1)	
≥ 9	22 (3)	91 (86)	11 (10)	1 (1)	3 (3)		57 (71)	17 (16)	9 (8)	5 (5)		102 (96)	2 (2)	
Number of people who smoke inside child's home						0.8					0.9			0.2
0	572 (91)	489 (85)	52 (9)	21 (4)	10 (2)		393 (69)	117 (20)	41 (7)	22 (4)		548 (96)	24 (4)	
≥ 1	56 (9)	47 (84)	7 (13)	1 (2)	1 (2)		41 (73)	10 (18)	4 (7)	1 (2)		55 (98)	0 (0)	

Child characteristics

Sex						0.9					0.9			0.7
Male	322 (51)	275 (85)	32 (10)	11 (3)	5 (2)		222 (69)	67 (21)	22 (7)	13 (4)		310 (96)	13 (4)	
Female	307 (49)	261 (85)	27 (9)	11 (4)	6 (2)		213 (70)	60 (20)	23 (8)	10 (3)		294 (96)	11 (4)	
Birth weight						0.3					0.9			0.7
< 2500 g	47 (7)	39 (83)	4 (9)	4 (9)	0 (0)		32 (68)	10 (21)	4 (9)	1 (2)		45 (96)	2 (4)	
≥ 2500 g	582 (93)	497 (85)	55 (9)	18 (3)	11 (2)		403 (69)	117 (20)	41 (7)	22 (4)		559 (96)	22 (4)	
Premature birth (< 37-week gestation)						0.1					0.03*			1.0
No	552 (88)	471 (85)	55 (10)	17 (3)	8 (1)		380 (69)	112 (20)	44 (8)	17 (3)		530 (96)	21 (4)	

						P-value[a]					P-value[a]			P-value[a]
Yes	77 (12)	65 (94)	4 (5)	5 (6)	3 (4)		55 (71)	15 (19)	1 (1)	6 (8)		74 (96)	3 (4)	
Method of delivery						0.7					0.2			1.0
Vaginal	481 (76)	411 (85)	42 (9)	18 (4)	9 (2)		339 (70)	95 (20)	34 (7)	14 (3)		461 (96)	19 (4)	
C-section	148 (24)	125 (84)	17 (11)	4 (3)	2 (1)		96 (65)	32 (22)	11 (7)	9 (6)		143 (97)	5 (3)	
Breastfeeding						0.2					0.1			0.02*
≤ 18 months	363 (58)	317 (87)	29 (8)	10 (3)	5 (1)		252 (69)	66 (18)	27 (7)	18 (5)		342 (94)	19 (5)	
> 18 months	260 (41)	213 (82)	30 (12)	12 (5)	5 (2)		179 (69)	59 (23)	17 (7)	5 (2)		255 (98)	5 (2)	

Notes:

Counts may not add to 629 due to missing data.

Percentages may not add to 100% due to rounding.

[a] P-values calculated using Fisher's Exact Tests.

[b] Energy intake was defined based on U.S. Institute of Medicine guidelines for pregnant women (18) as described by Huang et al. (10).

[c] Household income below the South African mid-2013-year food poverty level of 386 Rand/month/person.

Supplemental Table 2.2 – Number of persistent fever, cold and severe sore throat by participant characteristic among children participating in the Venda Health Examination of Mothers, Babies and their Environment (VHEMBE), Limpopo, South Africa

		Infection Outcomes											
		Persistent fever				Cold				Severe sore throat			
Characteristics	N (%)	N (%)			P-value[a]	N (%)			P-value[a]	N (%)			P-value[a]
		0	1	≥ 2		0–2	3–5	≥ 6		0	1	≥ 2	
Maternal characteristics during pregnancy													
Age (years)					0.2				0.9				0.3
< 25	319 (51)	289 (91)	23 (7)	5 (2)		185 (58)	113 (35)	12 (4)		271 (85)	39 (12)	7 (2)	
25–35	237 (38)	204 (86)	22 (9)	10 (4)		139 (59)	85 (36)	11 (5)		201 (85)	23 (10)	12 (5)	
> 35	73 (12)	64 (86)	8 (10)	2 (2)		44 (59)	26 (35)	2 (3)		64 (86)	7 (9)	3 (2)	
Education					0.6				0.01*				0.4
< Grade 12	361 (57)	323 (89)	28 (8)	8 (2)		229 (63)	118 (33)	8 (2)		314 (87)	38 (10)	8 (2)	
Grade 12	183 (29)	161 (88)	18 (10)	5 (3)		96 (52)	72 (39)	14 (8)		152 (83)	21 (11)	10 (5)	
> Grade 12	85 (14)	73 (87)	7 (8)	4 (5)		43 (51)	34 (40)	3 (4)		70 (83)	10 (12)	4 (5)	
Married or living as married					0.04*				0.9				0.8

					p				p				p
No	338 (54)	305 (90)	28 (8)	4 (1)		196 (58)	120 (35)	14 (4)		292 (86)	35 (10)	10 (3)	
Yes	291 (46)	252 (87)	35 (9)	13 (4)		172 (59)	104 (36)	11 (4)		244 (84)	34 (12)	12 (4)	
Parity (prior to birth of index child)					0.3				0.3				0.3
0	268 (43)	238 (89)	22 (8)	6 (2)		143 (53)	104 (39)	13 (5)		222 (83)	37 (14)	7 (3)	
1	173 (28)	158 (91)	10 (6)	4 (2)		109 (63)	57 (33)	5 (3)		149 (86)	16 (9)	7 (4)	
≥ 2	188 (30)	161 (85)	21 (11)	7 (4)		116 (61)	63 (33)	7 (4)		165 (87)	16 (8)	8 (4)	
HIV status					0.1				0.2				0.1
Negative	552 (88)	482 (87)	51 (9)	15 (3)		317 (58)	204 (37)	21 (4)		464 (84)	65 (12)	20 (4)	
Positive	77 (12)	75 (95)	2 (3)	2 (3)		51 (65)	20 (25)	4 (5)		72 (91)	4 (5)	2 (3)	
Energy intake during pregnancy[b]					0.3				0.5				0.4
Insufficient	198 (31)	170 (85)	20 (10)	7 (4)		113 (57)	73 (37)	10 (5)		174 (87)	20 (10)	4 (2)	
Sufficient	431 (69)	387 (90)	33 (8)	10 (2)		255 (59)	151 (35)	15 (3)		362 (84)	49 (11)	18 (4)	
Household poverty[c]					0.5				0.4				0.7
No	246 (39)	217 (88)	19 (8)	9 (4)		140 (57)	94 (38)	8 (3)		206 (83)	28 (11)	11 (4)	
Yes	383 (61)	340 (89)	34 (9)	8 (2)		228 (60)	130 (34)	17 (4)		330 (86)	41 (11)	11 (3)	

					p				p				p
Around smokers during pregnancy					0.4				0.3				0.8
No	391 (62)	348 (89)	33 (8)	8 (2)		237 (61)	131 (34)	16 (4)		330 (84)	45 (12)	15 (4)	
Yes	238 (39)	209 (87)	20 (8)	9 (4)		131 (55)	93 (39)	9 (4)		206 (86)	24 (10)	7 (3)	
Alcohol during pregnancy					0.2				0.2				0.4
No	592 (94)	522 (88)	52 (9)	15 (3)		348 (53)	206 (35)	25 (4)		500 (84)	67 (11)	22 (4)	
Yes	37 (6)	35 (92)	1 (3)	2 (5)		20 (53)	18 (47)	0 (0)		36 (95)	2 (5)	0 (0)	

Child household characteristics

					p				p				p
Household size					0.6				0.1				0.2
1–4	159 (25)	142 (89)	12 (8)	3 (2)		94 (59)	55 (35)	6 (4)		137 (86)	14 (9)	8 (5)	
5–8	323 (51)	290 (90)	24 (7)	9 (3)		193 (60)	119 (37)	6 (2)		279 (86)	37 (12)	5 (2)	
9–12	115 (18)	96 (83)	13 (11)	5 (4)		59 (51)	42 (37)	10 (9)		95 (83)	13 (11)	6 (5)	
≥ 13	32 (5)	28 (88)	4 (13)	0 (0)		21 (66)	9 (28)	2 (6)		26 (81)	4 (13)	2 (6)	
Number of people sleeping in same room as child					0.03*				0.2				0.7
≤ 2	151 (24)	139 (92)	10 (7)	1 (1)		87 (58)	58 (38)	2 (1)		126 (83)	20 (13)	4 (3)	

3–5	344 (55)	253 (88)	27 (9)	6 (2)		161 (56)	111 (39)	11 (4)		248 (86)	27 (9)	12 (3)
6–8	112 (18)	74 (86)	8 (9)	3 (3)		53 (62)	24 (28)	6 (7)		68 (79)	11 (13)	5 (4)
≥ 9	22 (3)	91 (86)	8 (8)	7 (7)		67 (63)	31 (29)	6 (6)		94 (89)	11 (10)	1 (5)
Number of people who smoke inside child's home				0.01*				1.0				0.03*
0	572 (91)	515 (90)	43 (8)	14 (2)		335 (58)	203 (35)	23 (4)		482 (84)	68 (12)	21 (4)
≥ 1	56 (9)	42 (75)	10 (18)	3 (5)		33 (59)	21 (38)	2 (4)		54 (96)	1 (2)	1 (2)

Child characteristics

Sex				1.0				0.7				0.1
Male	322 (51)	285 (88)	28 (9)	9 (3)		194 (60)	111 (34)	12 (4)		284 (88)	32 (10)	6 (2)
Female	307 (49)	272 (89)	25 (8)	8 (3)		174 (57)	113 (37)	13 (4)		252 (82)	37 (12)	16 (5)
Birth weight				0.7				0.7				0.2
< 2500 g	47 (7)	44 (94)	3 (6)	0 (0)		30 (64)	14 (30)	2 (4)		45 (96)	2 (4)	0 (0)
≥ 2500 g	582 (93)	513 (88)	50 (9)	17 (3)		338 (58)	210 (36)	23 (4)		491 (84)	67 (11)	22 (4)
Premature birth (< 37-week gestation)				0.5				0.3				0.6
No	552 (88)	492 (89)	45 (8)	14 (3)		317 (57)	202 (37)	22 (4)		468 (85)	63 (11)	19 (3)

					P-value[a]				P-value[a]				P-value[a]
Yes	77 (12)	65 (84)	8 (10)	3 (4)		51 (66)	22 (29)	3 (4)		68 (88)	6 (8)	3 (4)	
Method of delivery					0.5				0.3				0.2
Vaginal	481 (76)	429 (89)	41 (9)	11 (2)		283 (59)	172 (36)	16 (3)		421 (87)	43 (9)	13 (2)	
C-section	148 (24)	128 (86)	12 (8)	6 (4)		85 (57)	52 (35)	9 (6)		115 (78)	26 (18)	7 (5)	
Breastfeeding					0.1				0.02*				0.3
≤ 18 months	363 (58)	328 (90)	25 (7)	7 (2)		220 (61)	126 (35)	8 (2)		313 (86)	36 (10)	11 (3)	
> 18 months	260 (41)	222 (85)	28 (11)	10 (4)		143 (55)	97 (37)	16 (6)		216 (83)	33 (13)	11 (4)	

Notes:

Counts may not add to 629 due to missing data.

Percentages may not add to 100% due to rounding.

[a] P-values calculated using Fisher's Exact Tests.

[b] Energy intake was defined based on U.S. Institute of Medicine guidelines for pregnant women (18) as described by Huang et al. (10).

[c] Household income below the South African mid-2013-year food poverty level of 386 Rand/month/person.

Supplemental Table 3.1 – Associations (with and without adjustment for breastfeeding duration) between maternal peripartum serum DDT/E concentrations and infection symptoms among children participating in the Venda Health Examination of Mothers, Babies and their Environment (VHEMBE), Limpopo, South Africa (n=629)

Infection outcomes	*p,p'*-DDE		*p,p'*-DDT		*o,p'*-DDT	
	With breastfeeding IRR[a] [95% CI]	Without breastfeeding IRR[b] [95% CI]	With breastfeeding IRR[a] [95% CI]	Without breastfeeding IRR[b] [95% CI]	With breastfeeding IRR[a] [95% CI]	Without breastfeeding IRR[b] [95% CI]
Ear infection	1.0 [0.7, 1.3]	0.9 [0.7, 1.3]	1.0 [0.8, 1.3]	1.0 [0.8, 1.3]	1.1 [0.8, 1.5]	1.2 [0.9, 1.5]
Diarrhea	1.1 [0.9, 1.3]	1.1 [0.9, 1.3]	1.1 [0.9, 1.3]	1.1 [0.9, 1.3]	1.1 [0.9, 1.4]	1.1 [0.9, 1.4]
Persistent diarrhea	0.9 [0.6, 1.6]	0.9 [0.6, 1.6]	1.0 [0.7, 1.5]	1.0 [0.7, 1.6]	1.1 [0.6, 1.8]	1.1 [0.7, 1.8]
Persistent fever	1.2 [0.9, 1.7]	1.2 [0.8, 1.6]	1.1 [0.8, 1.5]	1.1 [0.8, 1.5]	1.3 [0.9, 1.8]	1.3 [0.9, 1.8]
Cold	1.0 [0.9, 1.2]	1.0 [0.9, 1.2]	1.0 [0.9, 1.1]	1.0 [0.9, 1.1]	1.0 [0.9, 1.2]	1.0 [0.8, 1.2]
Severe sore throat	1.2 [0.9, 1.6]	1.2 [0.9, 1.6]	1.0 [0.8, 1.3]	1.0 [0.8, 1.3]	0.9 [0.7, 1.2]	0.9 [0.7, 1.2]

Notes:

DDT = dichlorodiphenyltrichloroethane; DDE = dichlorodiphenyldichloroethylene; IRR = incidence rate ratio

Exposures are log-10 transformed.

[a] Models adjusted for maternal age, maternal education, maternal married or living as married, maternal energy intake, maternal HIV status and child sex.

[b] Models adjusted for maternal age, maternal education, maternal married or living as married, maternal energy intake, maternal HIV status and child sex.

Supplemental Table 3.2 – Associations (with and without adjustment for breastfeeding duration) between maternal peripartum pyrethroid metabolite urine concentrations and infection symptoms among children participating in the Venda Health Examination of Mothers, Babies and their Environment (VHEMBE), Limpopo, South Africa (n=629)

Infection outcomes	*cis*-DBCA		*cis*-DCCA		*trans*-DCCA		3-PBA	
	With breastfeeding IRR[a] [95% CI]	Without breastfeeding IRR[b] [95% CI]	With breastfeeding IRR[a] [95% CI]	Without breastfeeding IRR[b] [95% CI]	With breastfeeding IRR[a] [95% CI]	Without breastfeeding IRR[b] [95% CI]	With breastfeeding IRR[a] [95% CI]	Without breastfeeding IRR[b] [95% CI]
Ear infection	1.5 [1.0, 2.2]	1.5 [1.0, 2.3]	1.2 [0.7, 2.0]	1.2 [0.8, 2.0]	1.1 [0.7, 1.7]	1.2 [0.8, 1.8]	1.3 [0.8, 2.1]	1.3 [0.8, 2.2]
Diarrhea	1.0 [0.8, 1.3]	1.0 [0.8, 1.3]	1.0 [0.7, 1.4]	1.0 [0.7, 1.4]	1.0 [0.8, 1.4]	1.0 [0.8, 1.4]	1.0 [0.7, 1.5]	1.1 [0.7, 1.5]
Persistent diarrhea	2.1 [1.2, 3.9]	2.1 [1.2, 3.9]	1.8 [0.8, 4.0]	1.8 [0.8, 4.0]	1.9 [0.9, 3.9]	1.8 [0.9, 3.8]	1.4 [0.6, 3.6]	1.4 [0.6, 3.5]
Persistent fever	1.2 [0.8, 2.0]	1.3 [0.8, 2.0]	1.1 [0.7, 1.7]	1.1 [0.7, 1.7]	1.4 [1.0, 2.0]	1.4 [1.0, 2.1]	1.7 [1.0, 2.9]	1.7 [1.0, 3.0]
Cold	0.9 [0.7, 1.1]	0.9 [0.7, 1.1]	1.1 [0.9, 1.5]	1.1 [0.9, 1.5]	1.2 [1.0, 1.5]	1.3 [1.0, 1.6]	1.2 [0.9, 1.6]	1.2 [0.9, 1.6]
Severe sore throat	0.8 [0.6, 1.2]	0.8 [0.6, 1.3]	1.1 [0.7, 1.8]	1.1 [0.7, 1.8]	1.0 [0.7, 1.6]	1.0 [0.7, 1.6]	1.2 [0.7, 2.1]	1.2 [0.7, 2.1]

Notes:

cis-DBCA = *cis*-3-(2,2-dibromovinyl)-2,2-dimethyl-cyclopropanecarboxylicacid; *cis*-DCCA = *cis*-3-(2,2-dichlorovinyl)-2,2-dimethyl-cyclopropane carboxylicacid; *trans*-DCCA = *trans*-3-(2,2-dichlorovinyl)-2,2-dimethyl-cyclopropane carboxylicacid; PBA = phenoxybenzoic acid; IRR = incidence rate ratio

Exposures are log-10 transformed.

[a] Models adjusted for maternal age, maternal education, maternal married or living as married, maternal energy intake, maternal HIV status, child sex and breastfeeding duration.

[b] Models adjusted for maternal age, maternal education, maternal married or living as married, maternal energy intake, maternal HIV status and child sex.

Supplemental Table 4.1 – Associations between maternal peripartum serum DDT/E concentrations and infection symptoms among children participating in the Venda Health Examination of Mothers, Babies and their Environment (VHEMBE), Limpopo, South Africa (n=629)

Infection outcomes	p,p'-DDE		p,p'-DDT		o,p'-DDT	
	Poisson model IRR[a] [95% CI]	zero-inflated Poisson model IRR[b] [95% CI]	Poisson model IRR[a] [95% CI]	zero-inflated Poisson model IRR[b] [95% CI]	Poisson model IRR[a] [95% CI]	zero-inflated Poisson model IRR[b] [95% CI]
Ear infection	1.0 [0.7, 1.3]	0.9 [0.7, 1.1]	1.0 [0.8, 1.3]	0.9 [0.7, 1.1]	1.1 [0.8, 1.5]	1.0 [0.8, 1.4]
Diarrhea	1.1 [0.9, 1.3]	1.0 [0.9, 1.3]	1.1 [0.9, 1.3]	1.1 [0.9, 1.3]	1.1 [0.9, 1.4]	1.1 [0.9, 1.4]
Persistent diarrhea	0.9 [0.6, 1.6]	0.9 [0.5, 1.5]	1.0 [0.7, 1.5]	1.0 [0.6, 1.5]	1.1 [0.6, 1.8]	1.1 [0.7, 1.7]
Persistent fever	1.2 [0.9, 1.7]	1.2 [0.9, 1.6]	1.1 [0.8, 1.5]	1.1 [0.8, 1.5]	1.3 [0.9, 1.8]	1.3 [0.9, 1.8]
Cold	1.0 [0.9, 1.2]	1.0 [0.9, 1.2]	1.0 [0.9, 1.1]	1.0 [0.9, 1.1]	1.0 [0.9, 1.2]	1.0 [0.9, 1.2]
Severe sore throat	1.2 [0.9, 1.6]	1.2 [0.9, 1.7]	1.0 [0.8, 1.3]	1.0 [0.8, 1.3]	0.9 [0.7, 1.2]	0.9 [0.7, 1.3]

Notes:

DDT = dichlorodiphenyltrichloroethane; DDE = dichlorodiphenyldichloroethylene; IRR = incidence rate ratio

Exposures are log-10 transformed.

[a] Models adjusted for maternal age, maternal education, maternal married or living as married, maternal energy intake, maternal HIV status, child sex and child breastfeeding.

[b] Models adjusted for maternal age, maternal education, maternal married or living as married, maternal energy intake, maternal HIV status, child sex and child breastfeeding, as well as the independent variables lived with child, household size and reliability score.

Supplemental Table 4.2 – Associations between maternal peripartum pyrethroid metabolite urine concentrations and infection symptoms among children participating in the Venda Health Examination of Mothers, Babies and their Environment (VHEMBE), Limpopo, South Africa (n=629)

Infection outcomes	*cis*-DBCA		*cis*-DCCA		*trans*-DCCA		3-PBA	
	Poisson model IRR[a] [95% CI]	zero-inflated Poisson model IRR[b] [95% CI]	Poisson model IRR[a] [95% CI]	zero-inflated Poisson model IRR[b] [95% CI]	Poisson model IRR[a] [95% CI]	zero-inflated Poisson model IRR[b] [95% CI]	Poisson model IRR[a] [95% CI]	zero-inflated Poisson model IRR[b] [95% CI]
Ear infection	1.5 [1.0, 2.2]	1.4 [1.0, 2.0]	1.2 [0.7, 2.0]	1.2 [0.8, 1.9]	1.1 [0.7, 1.7]	1.1 [0.7, 1.6]	1.3 [0.8, 2.1]	1.3 [0.8, 1.9]
Diarrhea	1.0 [0.8, 1.3]	1.0 [0.8, 1.3]	1.0 [0.7, 1.4]	1.0 [0.7, 1.4]	1.0 [0.8, 1.4]	1.0 [0.8, 1.4]	1.0 [0.7, 1.5]	1.1 [0.7, 1.5]
Persistent diarrhea	2.1 [1.2, 3.9]	1.8 [1.0, 3.6]	1.8 [0.8, 4.0]	1.9 [0.9, 4.3]	1.9 [0.9, 3.9]	1.9 [0.9, 4.0]	1.4 [0.6, 3.6]	1.4 [0.5, 3.7]
Persistent fever	1.2 [0.8, 2.0]	1.3 [0.8, 2.1]	1.1 [0.7, 1.7]	1.1 [0.7, 1.7]	1.4 [1.0, 2.0]	1.4 [0.9, 2.1]	1.7 [1.0, 2.9]	1.8 [1.0, 3.3]
Cold	0.9 [0.7, 1.1]	0.9 [0.7, 1.1]	1.1 [0.9, 1.5]	1.1 [0.9, 1.5]	1.2 [1.0, 1.5]	1.2 [1.0, 1.5]	1.2 [0.9, 1.6]	1.2 [0.9, 1.6]

| **Severe sore throat** | 0.8 [0.6, 1.2] | 0.8 [0.5, 1.2] | 1.1 [0.7, 1.8] | 1.1 [0.7, 1.8] | 1.0 [0.7, 1.6] | 1.0 [0.7, 1.6] | 1.2 [0.7, 2.1] | 1.2 [0.7, 1.9] |

Notes:

cis-DBCA = *cis*-3-(2,2-dibromovinyl)-2,2-dimethyl-cyclopropanecarboxylicacid; *cis*-DCCA = *cis*-3-(2,2-dichlorovinyl)-2,2-dimethyl-cyclopropane carboxylicacid; *trans*-DCCA = *trans*-3-(2,2-dichlorovinyl)-2,2-dimethyl-cyclopropane carboxylicacid; PBA = phenoxybenzoic acid; IRR = incidence rate ratio

Exposures are log-10 transformed.

[a] Models adjusted for maternal age, maternal education, maternal married or living as married, maternal energy intake, maternal HIV status, child sex and child breastfeeding.

[b] Models adjusted for maternal age, maternal education, maternal married or living as married, maternal energy intake, maternal HIV status, child sex and child breastfeeding, as well as the independent variables lived with child, household size and reliability score.

Supplemental Table 5 – Associations between maternal peripartum DDT/E serum and pyrethroid metabolite urine concentrations and infection symptoms by sex, household food poverty and maternal energy intake during pregnancy among children participating in the Venda Health Examination of Mothers, Babies and their Environment (VHEMBE), Limpopo, South Africa (n=629)

Infection outcomes	Child sex				Household poverty level				Maternal energy intake			
	Poisson model[a]		zero-inflated Poisson model[b]		Poisson model[a]		zero-inflated Poisson model[b]		Poisson model[a]		zero-inflated Poisson model[b]	
	Males IRR [95% CI]	Females IRR [95% CI]	Males IRR [95% CI]	Females IRR [95% CI]	Below Poverty IRR [95% CI]	Above Poverty IRR [95% CI]	Below Poverty IRR [95% CI]	Above Poverty IRR [95% CI]	Sufficient IRR [95% CI]	Insufficient IRR [95% CI]	Sufficient IRR [95% CI]	Insufficient IRR [95% CI]
Ear infection												
p,p-DDE	1.0 [0.6, 1.5]	1.0 [0.6, 1.4]	0.9 [0.6, 1.3]	0.9 [0.6, 1.3]	1.0 [0.7, 1.3]	0.9 [0.7, 1.3]	0.9 [0.7, 1.2]	0.9 [0.6, 1.1]	1.0 [0.6, 1.4]	1.0 [0.6, 1.7]	0.9 [0.6, 1.2]	0.9 [0.6, 1.3]
p,p-DDT	1.0 [0.7, 1.4]	1.0 [0.7, 1.4]	0.9 [0.6, 1.2]	1.0 [0.7, 1.3]	1.0 [0.8, 1.4]	1.0 [0.7, 1.3]	0.9 [0.7, 1.2]	0.9 [0.7, 1.2]	0.9 [0.6, 1.3]	1.2 [0.8, 1.8]	0.9 [0.7, 1.1]	1.0 [0.6, 1.6]
o,p-DDT	1.2 [0.8, 1.8]	1.1 [0.8, 1.6]	1.1 [0.7, 1.6]	1.0 [0.7, 1.5]	1.3 [0.9, 1.8]	1.1 [0.8, 1.5]	1.1 [0.8, 1.5]	1.0 [0.7, 1.4]	1.0 [0.7, 1.5]	1.5 [1.0, 2.4]	1.0 [0.7, 1.3]	1.3 [0.7, 2.4]
cis-DBCA	1.6 [1.0, 2.5]	1.5 [0.8, 2.9]	1.6 [1.0, 2.6]	1.4 [0.8, 2.4]	1.9 [1.0, 3.6]	1.4 [0.9, 2.2]	1.6 [0.9, 2.8]	1.4 [0.9, 2.2]	1.5 [0.9, 2.5]	1.5 [0.8, 2.8]	1.4 [0.9, 2.3]	1.4 [0.8, 2.5]

cis-DCCA	1.1	1.2	1.2	1.3	1.3	1.1	1.6	1.1	1.2	1.2	1.2	1.3
	[0.6, 2.0]	[0.6, 2.6]	[0.6, 2.4]	[0.7, 2.3]	[0.7, 2.5]	[0.6, 2.0]	[0.8, 3.2]	[0.7, 1.9]	[0.7, 2.1]	[0.5, 3.0]	[0.8, 1.9]	[0.6, 2.8]
trans-DCCA	1.3	0.8	1.4	0.8	1.6	0.9	1.5	0.9	1.2	0.9	1.1	0.9
	[0.8, 2.2]	[0.4, 1.7]	[0.8, 2.6]	[0.5, 1.4]	[0.9, 2.9]	[0.5, 1.5]	[0.8, 2.9]	[0.6, 1.4]	[0.7, 2.0]	[0.4, 2.1]	[0.8, 1.7]	[0.4, 2.0]
3-PBA	1.2	1.3	1.2	1.4	2.0	1.0	2.3	1.0	1.5	1.0	1.4	1.1
	[0.6, 2.4]	[0.6, 2.8]	[0.7, 2.3]	[0.7, 2.6]	[0.9, 4.4]	[0.5, 1.9]	[0.9, 5.7]	[0.6,11.8]	[0.8, 2.6]	[0.4, 2.6]	[0.8, 2.3]	[0.5, 2.4]

Diarrhea

p,p-DDE	0.9	1.2	0.9	1.2	1.0	1.1	1.0	1.0	1.0	1.2	1.0	1.2
	[0.7, 1.2]	[0.9, 1.7]	[0.7, 1.1]	[0.9, 1.6]	[0.8, 1.2]	[0.9, 1.3]	[0.8, 1.2]	[0.9, 1.3]	[0.8, 1.3]	[0.8, 1.8]	[0.8, 1.3]	[0.8, 1.5]
p,p-DDT	1.0	1.2	1.0	1.2	1.0	1.1	1.0	1.1	1.0	1.2	1.0	1.2
	[0.8, 1.3]	[0.9, 1.5]	[0.8, 1.2]	[0.9, 1.4]	[0.8, 1.2]	[1.0, 1.3]	[0.8, 1.2]	[0.9, 1.3]	[0.9, 1.3]	[0.9, 1.7]	[0.9, 1.3]	[0.9, 1.6]
o,p-DDT	1.1	1.2	1.0	1.1	1.0	1.2	1.0	1.2	1.1	1.3	1.1	1.2
	[0.9, 1.5]	[0.8, 1.6]	[0.8, 1.4]	[0.8, 1.5]	[0.8, 1.4]	[1.0, 1.5]	[0.7, 1.4]	[0.9, 1.5]	[0.9, 1.4]	[0.9, 2.0]	[0.9, 1.4]	[0.8, 1.8]
cis-DBCA	1.1	0.9	1.1	0.9	1.1	1.0	1.1	1.0	1.0	1.1	1.0	1.0
	[0.8, 1.7]	[0.6, 1.4]	[0.8, 1.5]	[0.7, 1.4]	[0.8, 1.6]	[0.7, 1.3]	[0.8, 1.6]	[0.7, 1.3]	[0.7, 1.3]	[0.7, 1.7]	[0.7, 1.4]	[0.6, 1.5]
cis-DCCA	0.9	1.1	0.9	1.1	1.0	0.9	1.0	0.9	1.0	0.9	1.0	0.9
	[0.5, 1.4]	[0.6, 1.7]	[0.5, 1.4]	[0.7, 1.7]	[0.6, 1.6]	[0.6, 1.4]	[0.6, 1.6]	[0.6, 1.4]	[0.6, 1.6]	[0.5, 1.6]	[0.7, 1.6]	[0.5, 1.6]
trans-DCCA	0.8	1.3	0.9	1.3	1.0	1.0	1.0	1.1	1.0	1.1	1.0	1.1
	[0.5, 1.2]	[0.8, 1.9]	[0.6, 1.3]	[0.9, 1.8]	[0.7, 1.4]	[0.7, 1.5]	[0.7, 1.4]	[0.8, 1.4]	[0.7, 1.4]	[0.7, 1.9]	[0.7, 1.4]	[0.7, 1.8]
3-PBA	0.9	1.2	0.9	1.3	0.6	1.4	0.6	1.4	1.0	1.2	1.0	1.1
	[0.6, 1.4]	[0.7, 2.2]	[0.6, 1.3]	[0.8, 2.2]	[0.4, 1.0]	[0.9, 2.2]	[0.3, 1.0]	[0.9, 2.1]	[0.6, 1.6]	[0.7, 2.2]	[0.6, 1.7]	[0.6, 1.9]

Persistent diarrhea

p,p-DDE	0.7	1.5	0.7	1.2	0.9	1.0	0.8	0.9	1.0	0.8	0.9	0.8
	[0.3, 1.5]	[0.7, 3.0]	[0.4, 1.6]	[0.5, 2.4]	[0.5, 1.6]	[0.6, 1.7]	[0.5 1.5]	[0.5, 1.5]	[0.5, 1.7]	[0.1, 4.4]	[0.5, 1.6]	[0.2, 3.9]
p,p-DDT	0.6	1.6	0.6	1.4	0.8	1.0	0.8	0.9	1.0	0.9	1.0 [	0.8
	[0.3, 1.1]	[1.0, 2.6]	[0.4, 1.2]	[0.8, 2.3]	[0.5, 1.4]	[0.7, 1.6]	[0.5, 1.3]	[0.6, 1.4]	[0.7, 1.6]	[0.2, 4.1]	0.6, 1.5]	[0.2, 3.5]
o,p-DDT	0.7	1.6	0.7	1.5	0.7	1.1	0.7	1.1	1.0	2.1	1.0	1.5
	[0.3, 1.3]	[0.8, 3.2]	[0.4, 1.3]	[0.7, 2.9]	[0.3, 1.5]	[0.7, 1.9]	[0.3, 1.4]	[0.7, 1.8]	[0.6, 1.6]	[0.5, 8.4]	[0.6, 1.6]	[0.4, 5.6]
cis-DBCA	1.8	2.7	1.7	2.3	1.8	2.4	1.6	2.1	1.8	3.4	1.7	2.9
	[0.8, 4.4]	[1.0, 6.9]	[0.7, 4.3]	[0.8, 6.4]	[0.6, 5.3]	[1.1, 4.9]	[0.5, 4.8]	[1.0, 4.6]	[0.9, 3.9]	[1.7, 6.6]	[0.8, 3.6]	[1.3, 6.4]
cis-DCCA	1.4	2.9	1.4	3.7	1.2	2.6	1.2	3.0	1.5	3.5	1.5	3.3
	[0.4, 4.8]	[1.1, 7.9]	[0.4, 5.0]	[1.1,11.9]	[0.4, 3.6]	[1.0, 7.2]	[0.4, 3.7]	[0.9, 9.7]	[0.6, 3.7]	[1.7, 7.4]	[0.6, 4.2]	[1.5, 7.3]
trans-DCCA	1.3	3.2	1.3	3.8	1.0	2.8	1.0	3.0	1.5	4.3	1.6	3.8
	[0.5, 3.2]	[0.9, 10.9]	[0.5, 3.3]	[1.0,13.9]	[0.3, 2.7]	[1.2, 6.8]	[0.3, 2.8]	[1.2, 7.8]	[0.7, 3.3]	[1.4, 12.8]	[0.7, 3.7]	[1.3, 10.9]
3-PBA	1.1	2.2	1.0	2.1	0.5	2.2	0.5	2.1	1.1	5.4	1.1	4.5
	[0.4, 3.2]	[0.5, 9.5]	[0.3, 3.3]	[0.5, 9.2]	[0.2, 1.9]	[0.8, 6.3]	[0.1, 2.0]	[0.7, 6.4]	[0.4, 3.1]	[2.0, 14.4]	[0.4, 3.1]	[1.6, 12.9]

Persistent fever

p,p-DDE	1.1	1.3	1.1	1.3	1.1	1.2	1.2	1.2	1.3	1.0	1.3	1.1
	[0.7, 1.7]	[0.8, 2.2]	[0.7, 1.7]	[0.8, 2.1]	[0.8, 1.6]	[0.9, 1.7]	[0.8, 1.6]	[0.9, 1.7]	[0.9, 1.9]	[0.6, 1.8]	[0.9, 2.0]	[0.6, 1.7]

p,p-DDT	1.2	1.0	1.2	1.0	1.1	1.2	1.2	1.2	1.2	1.0	1.2	1.1
	[0.8, 1.8]	[0.6, 1.5]	[0.8, 1.8]	[0.7, 1.5]	[0.8, 1.6]	[0.9, 1.7]	[0.8, 1.6]	[0.9, 1.7]	[0.8, 1.6]	[0.6, 1.8]	[0.8, 1.6]	[0.7, 1.7]
o,p-DDT	1.5	1.2	1.4	1.2	1.2	1.4	1.3	1.3	1.2	1.6	1.2	1.5
	[1.0, 2.2]	[0.7, 1.8]	[0.9, 2.2]	[0.8, 1.8]	[0.8, 1.8]	[1.0, 1.9]	[0.9, 1.9]	[0.9, 1.8]	[0.8, 1.7]	[0.9, 2.8]	[0.8, 1.7]	[0.9, 2.6]
cis-DBCA	1.4	1.1	1.4	1.0	1.3	1.2	1.3	1.1	1.3	1.2	1.3	1.3
	[0.7, 3.0]	[0.6, 1.9]	[0.7, 3.1]	[0.6, 1.8]	[0.7, 2.3]	[0.7, 2.2]	[0.8, 2.2]	[0.6, 2.1]	[0.7, 2.3]	[0.6, 2.6]	[0.7, 2.3]	[0.6, 2.7]
cis-DCCA	1.4	0.9	1.4	0.8	1.1	1.1	1.0	1.2	1.4	0.7	1.6	0.6
	[0.7, 2.6]	[0.5, 1.7]	[0.7, 2.6]	[0.4, 1.7]	[0.6, 2.2]	[0.7, 1.9]	[0.5, 2.0]	[0.6, 2.2]	[0.8, 2.3]	[0.3, 1.7]	[0.8, 3.0]	[0.3, 1.4]
trans-DCCA	1.3	1.7	1.3	1.7	1.7	1.3	1.6	1.3	1.4	1.3	1.6	1.1
	[0.7, 2.4]	[1.0, 2.7]	[0.7, 2.4]	[1.0, 3.2]	[1.0, 3.0]	[0.8, 2.2]	[0.9, 2.8]	[0.7, 2.5]	[0.9, 2.4]	[0.7, 2.4]	[0.9, 2.9]	[0.6, 2.0]
3-PBA	2.2	1.4	2.4	1.5	2.1	1.6	2.0	1.8	2.0	1.3	2.9	1.1
	[1.0, 4.8]	[0.7, 2.9]	[1.0, 5.4]	[0.6, 3.3]	[0.8, 5.6]	[0.9, 3.2]	[0.8, 4.9]	[0.8, 4.2]	[1.0, 4.0]	[0.5, 3.2]	[1.2, 6.7]	[0.5, 2.3]

Cold

p,p-DDE	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	0.8	1.1	0.8
	[0.8, 1.2]	[0.8, 1.2]	[0.8, 1.2]	[0.8, 1.2]	[0.8, 1.1]	[0.9, 1.2]	[0.8, 1.1]	[0.9, 1.2]	[0.9, 1.3]	[0.6, 1.1]	[0.9, 1.3]	[0.6, 1.1]
p,p-DDT	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	1.0	0.9
	[0.8, 1.2]	[0.8, 1.2]	[0.8, 1.2]	[0.8, 1.2]	[0.8, 1.1]	[0.9, 1.1]	[0.8, 1.1]	[0.9, 1.1]	[0.9, 1.2]	[0.7, 1.1]	[0.9, 1.2]	[0.7, 1.1]
o,p-DDT	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	[0.8, 1.3]	[0.8, 1.2]	[0.8, 1.3]	[0.8, 1.2]	[0.8, 1.2]	[0.9, 1.2]	[0.8, 1.2]	[1.0, 1.2]	[0.8, 1.2]	[0.8, 1.3]	[0.8, 1.2]	[0.8, 1.3]
cis-DBCA	0.7	1.1	0.7	1.1	0.9	0.9	0.9	0.9	0.8	1.0	0.8	0.9
	[0.5, 1.0]	[0.8, 1.5]	[0.5, 1.0]	[0.8, 1.5]	[0.7, 1.2]	[0.7, 1.1]	[0.7, 1.2]	[0.7, 1.1]	[0.6, 1.1]	[0.7, 1.4]	[0.6, 1.1]	[0.6, 1.4]

cis-DCCA	1.2	1.1	1.2	1.1	1.4	1.0	1.4	1.0	1.2	1.1	1.2	1.1
	[0.8, 1.8]	[0.8, 1.6]	[0.8, 1.8]	[0.8, 1.6]	[1.0, 2.0]	[0.8, 1.4]	[0.9, 2.0]	[0.8, 1.4]	[0.8, 1.6]	[0.7, 1.8]	[0.9, 1.6]	[0.7, 1.8]
trans-DCCA	1.3	1.2	1.3	1.2	1.4	1.2	1.4	1.2	1.2	1.4	1.2	1.4
	[0.9, 1.8]	[0.9, 1.6]	[0.9, 1.8]	[0.9, 1.6]	[1.0, 2.1]	[0.9, 1.5]	[1.0, 2.1]	[0.9, 1.5]	[0.9, 1.5]	[0.9, 2.1]	[0.9, 1.5]	[0.9, 2.1]
3-PBA	1.3	1.2	1.3	1.2	1.8	1.0	1.8	1.0	1.2	1.3	1.2	1.2
	[0.8, 1.0]	[0.9, 1.7]	[0.8, 2.0]	[0.9, 1.8]	[1.2, 2.8]	[0.7, 1.5]	[1.2, 2.7]	[0.7, 1.5]	[0.8, 1.6]	[0.7, 2.3]	[0.9, 1.6]	[0.7, 2.3]

Severe sore

throat

p,p-DDE	1.7	0.9	1.3	1.3	1.8	1.0	1.3	1.3	1.3	0.9	1.4	0.9
	[1.1, 2.7]	[0.6, 1.4]	[0.9, 1.7]	[0.9, 1.7]	[1.1, 2.8]	[0.7, 1.5]	[0.9, 1.7]	[0.9, 1.7]	[0.9, 1.7]	[0.4, 2.1]	[1.0, 1.9]	[0.4, 1.9]
p,p-DDT	1.5	0.8	1.1	1.1	1.4	0.9	1.1	1.1	1.0	1.0	1.0	1.0
	[1.0, 2.2]	[0.6, 1.1]	[0.9, 1.4]	[0.8, 1.4]	[1.0, 2.1]	[0.6, 1.2]	[0.9, 1.4]	[0.8, 1.4]	[0.7, 1.3]	[0.6, 1.7]	[0.8, 1.4]	[0.6, 1.7]
o,p-DDT	1.3	0.8	1.2	1.0	1.4	0.9	1.2	1.0	0.9	1.0	0.9	1.0
	[0.8, 2.1]	[0.5, 1.1]	[0.8, 1.7]	[0.7, 1.5]	[0.9, 2.1]	[0.6, 1.4]	[0.8, 1.7]	[0.7, 1.5]	[0.6, 1.2]	[0.6, 1.7]	[0.7, 1.3]	[0.5, 1.7]
cis-DBCA	1.2	0.7	0.7	1.0	1.1	0.7	0.7	1.0	0.4	0.7	0.8	0.7
	[0.6, 2.3]	[0.4, 1.2]	[0.4, 1.1]	[0.6, 1.6]	[0.5, 2.2]	[0.4, 1.3]	[0.4, 1.1]	[0.6, 1.6]	[0.6, 1.4]	[0.3, 1.5]	[0.5, 1.4]	[0.3, 1.7]
cis-DCCA	1.0	1.3	1.7	0.9	1.1	1.1	1.7	0.9	1.4	0.5	1.4	0.5
	[0.4, 2.7]	[0.8, 2.2]	[0.9, 3.4]	[0.6, 1.5]	[0.4, 2.9]	[0.7, 1.8]	[0.9, 3.4]	[0.6, 1.5]	[0.9, 2.4]	[0.2, 1.3]	[0.9, 2.4]	[0.3, 1.1]
trans-DCCA	1.1	1.2	1.7	0.9	1.2	1.1	1.7	0.9	1.2	0.6	1.2	0.6
	[0.5, 2.5]	[0.7, 1.9]	[0.9, 3.1]	[0.6, 1.4]	[0.5, 2.7]	[0.7, 1.5]	[0.9, 3.1]	[0.6, 1.4]	[0.7, 2.0]	[0.3, 1.2]	[0.8, 1.9]	[0.3, 1.1]
3-PBA	1.3	1.3	2.0	0.9	1.4	1.1	2.0	0.9	1.6	0.5	1.5	0.6

[0.4, 3.9]	[0.8, 2.2]	[1.1, 3.7]	[0.5, 1.8]	[0.5, 4.1]	[0.7, 1.6]	[1.1, 3.7]	[0.5, 1.8]	[1.0, 2.9]	[0.2, 1.2]	[0.9, 2.6]	[0.3, 1.2]

Notes:

DDT = dichlorodiphenyltrichloroethane; DDE = dichlorodiphenyldichloroethylene; *cis*-DBCA = *cis*-3-(2,2-dibromovinyl)-2,2-dimethyl-cyclopropanecarboxylicacid; *cis*-DCCA = *cis*-3-(2,2-dichlorovinyl)-2,2-dimethyl-cyclopropane carboxylicacid; *trans*-DCCA = *trans*-3-(2,2-dichlorovinyl)-2,2-dimethyl-cyclopropane carboxylicacid; PBA = phenoxybenzoic acid; IRR = incidence rate ratio

Exposures are log-10 transformed.

[a] Models adjusted for maternal age, maternal education, maternal married or living as married, maternal energy intake, maternal HIV status, child sex and child breastfeeding.

[b] Models adjusted for maternal age, maternal education, maternal married or living as married, maternal energy intake, maternal HIV status, child sex and child breastfeeding, as well as the independent variables lived with child, household size and reliability score.