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Supplemental Material

Modeling Spatial Risk of Diarrheal Disease Associated with Household Proximity to Untreated Wastewater Used for Irrigation in the Mezquital Valley, Mexico

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Table of Contents

Table S1. Sensitivity analysis on the effect of changing the prior for the length-scale of the spatially correlated household random effect. Results are presented from the fully adjusted model for the association between diarrhea and a 10-fold increase in household distance from a canal. Rows indicate separate models with different priors for the length-scale.

Table S2. Characteristics of study participants by combined locality group.

Table S1: Sensitivity analysis on the effect of changing the prior for the length-scale of the spatially correlated household random effect. Results are presented from the fully adjusted model for the association between diarrhea and a 10-fold increase in household distance from a canal. Rows indicate separate models with different priors for the length-scale.

Prior for the Length-Scale (95% Prior Interval)	Odds Ratio for Diarrhea associated with a 10-fold Increase in Household Distance OR (95% CI)
67m (32m, 114m) ^a	0.55 (0.34, 0.91)
100m (48m, 171m)	0.55 (0.34, 0.91)
200m (122m, 297m)	0.54 (0.33, 0.90)
400m (286m, 533m)	0.55 (0.34, 0.89)
800m (634m, 985m)	0.56 (0.34, 0.91)

^a Prior selected for the final adjusted model

Table S2: Characteristics of study participants by combined locality group

	Group A1 (n = 109)	Group A2 (n = 87)	Group A3 (n = 52)	Group A4 (n = 32)	Group B1 (n = 67)	Group B2 (n = 39)	Group B3 (n = 93)	Group B4 (n = 40)	Group B5 (n = 45)
<i>Household Characteristics</i>									
Distance to a Canal in Meters, Mean (Range)	290 (8 - 1,135)	279 (14 - 507)	512 (208 - 990)	174 (27 - 281)	267 (24 - 937)	151 (7 - 402)	563 (155 - 1,181)	126 (2 - 391)	332 (23 - 949)
Total Years of Caregiver Education, Mean \pm SD	9.7 \pm 3.7	9.9 \pm 2.9	9.2 \pm 3.3	9.3 \pm 1.7	9.0 \pm 2.3	9.1 \pm 2.6	9.5 \pm 2.8	9.3 \pm 3.2	9.8 \pm 2.6
Has Refrigerator, No. (%)	92 (84)	72 (83)	31 (60)	19 (59)	57 (85)	33 (85)	78 (84)	29 (73)	36 (80)
Has Cellular Telephone, No. (%)	105 (96)	85 (98)	44 (85)	25 (78)	64 (96)	36 (92)	89 (96)	37 (93)	42 (93)
Has Vehicle, No. (%)	53 (49)	30 (34)	9 (17)	13 (41)	22 (32)	11 (28)	32 (34)	15 (38)	20 (44)
Has Washing Machine, No. (%)	71 (65)	46 (53)	17 (33)	13 (41)	46 (69)	12 (31)	67 (72)	25 (63)	26 (58)
Has Microwave, No. (%)	35 (32)	13 (15)	3 (6)	7 (22)	20 (30)	9 (23)	17 (18)	8 (20)	15 (33)

Has Computer, No. (%)	22 (20)	2 (2)	3 (6)	2 (6)	4 (6)	4 (10)	13 (14)	4 (10)	7 (16)
Has Flat Screen Television, No. (%)	59 (54)	60 (69)	26 (50)	17 (53)	36 (54)	21 (54)	58 (62)	27 (68)	32 (71)
Has Field Worker, No. (%)	15 (14)	63 (72)	28 (54)	17 (53)	15 (22)	11 (28)	10 (11)	2 (5)	7 (16)
Owns Dog, No. (%)	75 (69)	59 (68)	39 (75)	23 (72)	61 (91)	24 (62)	51 (55)	23 (58)	39 (87)
Has Access to Sewerage, No. (%)	94 (86)	86 (99)	45 (87)	32 (100)	65 (97)	37 (95)	93 (100)	33 (83)	44 (98)
Had Diarrheal Case at Any Survey Round, No. (%)	26 (24)	12 (14)	11 (21)	4 (13)	10 (15)	2 (5)	16 (17)	12 (30)	15 (33)
Had More than One Child Under Five During at Least One Survey Round, No. (%)	4 (6)	6 (15)	10 (11)	2 (5)	13 (29)	10 (9)	14 (16)	15 (29)	5 (16)

<i>Characteristics of All Child Observations (n = 1,856)</i>									
Child Had Diarrhea in Preceding Week, No. (%)	24 (7)	13 (5)	10 (5)	4 (4)	10 (5)	2 (2)	15 (5)	13 (10)	14 (8)
Rainy Season, No. (%)	229 (66)	188 (66)	120 (65)	66 (64)	137 (66)	88 (67)	199 (66)	84 (67)	112 (66)
Age of Child in Months, Mean \pm SD	25.0 \pm 14.5	28.7 \pm 14.5	27.9 \pm 13.2	30.7 \pm 13.6	26.8 \pm 14.3	30.1 \pm 14.3	28.3 \pm 13.9	26.5 \pm 12.8	26.4 \pm 13.2