Supporting Information for "Examining the Impacts of Measurement Error in Quantifying Health Disparities: A Case Study on Type-2 Diabetes and the Food Environment"

Cassandra K. Hung, Darcy Green, and Sarah C. Lotspeich

Department of Statistical Sciences, Wake Forest University

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Table S1: Results based on the analyses of proximity-based disparities in diabetes based on straight-line and map-based distances (binned into roughly 1-mile categories).

Exposure (Binned)	j	Patients $n(\%)$	Diabetes Prevalence (95% CI)	Rate Ratio (95% CI)	Relative Index of Inequality (95% CI)
Straight-Line Proximity					
More than 5 miles	1	53 (6%)	0.09 (0.02, 0.17)	1.44 (0.58, 3.59)	1.12 (0.45, 2.75)
Between 4 − 5 miles	2	41 (4%)	0.00 (0.00, 0.00)	0.00 (0.00, 0.00)	-
Between 3 − 4 miles	3	72 (8%)	0.10 (0.03, 0.17)	1.49 (0.67, 3.29)	-
Between 2 − 3 miles	4	107 (12%)	0.07 (0.02, 0.11)	1.00 (0.45, 2.24)	-
Between 1 − 2 miles	5	238 (26%)	0.07 (0.04, 0.10)	1.09 (0.61, 1.96)	-
Up to 1 mile	6	413 (45%)	0.07 (0.04, 0.09)	Referent	Referent
Map-Based Proximity					
More than 5 miles	1	119 (13%)	0.06 (0.02, 0.10)	0.98 (0.41, 2.34)	1.10 (0.45, 2.64)
Between 4 − 5 miles	2	71 (8%)	0.11 (0.04, 0.19)	1.88 (0.83, 4.25)	-
Between 3 − 4 miles	3	92 (10%)	0.07 (0.01, 0.12)	1.09 (0.43, 2.72)	-
Between 2 − 3 miles	4	126 (14%)	0.04 (0.01, 0.07)	0.66 (0.25, 1.78)	-
Between 1 − 2 miles	5	266 (29%)	0.08 (0.05, 0.12)	1.38 (0.73, 2.60)	-
Up to 1 mile	6	250 (27%)	0.06 (0.03, 0.09)	Referent	Referent

Table S2: Results based on the analyses of food insecurity-based disparities in diabetes based on the lower bound, survey estimate, and upper bound (binned into roughly 2.5% categories).

Exposure (Binned)	j	Patients $n(\%)$	Diabetes Prevalence (95% CI)	Rate Ratio (95% CI)	Relative Index of Inequality (95% CI)
Lower Bound of Food Insecurity					
More than 20%	1	124 (13%)	0.11 (0.06, 0.17)	1.82 (0.87, 3.80)	2.26 (0.94, 5.57)
Between 17.5 − 20%	2	239 (26%)	0.07 (0.04, 0.10)	1.08 (0.52, 2.22)	-
Between 15 − 17.5%	3	36 (4%)	0.06 (0.00, 0.13)	0.89 (0.21, 3.82)	-
Between 12.5 − 15%	4	174 (19%)	0.09 (0.04, 0.13)	1.39 (0.67, 2.88)	-
Between 10 − 12.5%	5	158 (17%)	0.03 (0.00, 0.05)	0.41 (0.13, 1.24)	-
Up to 10%	6	193 (21%)	0.06 (0.03, 0.10)	Referent	Referent
Survey Estimate of Food Insecurity					
More than 20%	1	270 (23%)	0.08 (0.05, 0.11)	1.20 (0.61, 2.37)	1.65 (0.69, 4.05)
Between 17.5 − 20%	2	109 (12%)	0.08 (0.03, 0.13)	1.22 (0.53, 2.79)	-
Between 15 − 17.5%	3	118 (13%)	0.06 (0.02, 0.10)	0.88 (0.35, 2.16)	-
Between 12.5 − 15%	4	169 (18%)	0.07 (0.03, 0.11)	0.96 (0.44, 2.12)	-
Between 10 − 12.5%	5	81 (9%)	0.02 (0.00, 0.06)	0.36 (0.08, 1.59)	-
Up to 10%	6	177 (19%)	0.07 (0.03, 0.10)	Referent	Referent
Upper Bound of Food Insecurity					
More than 20%	1	376 (41%)	0.08 (0.05, 0.11)	1.04 (0.49, 2.19)	1.81 (0.73, 4.61)
Between 17.5 − 20%	2	96 (10%)	0.08 (0.03, 0.14)	1.08 (0.42, 2.77)	-
Between 15 − 17.5%	3	156 (17%)	0.07 (0.03, 0.11)	0.92 (0.38, 2.20)	-
Between 12.5 − 15%	4	103 (11%)	0.02 (0.00, 0.05)	0.25 (0.05, 1.16)	-
Between 10 − 12.5%	5	89 (10%)	0.04 (0.00, 0.09)	0.58 (0.18, 1.88)	-
Up to 10%	6	104 (11%)	0.08 (0.03, 0.13)	Referent	Referent