

Supplemental material for Bayesian spatial quantile regression for areal count data, with application on substitute care placements in Texas

Clay King and Joon Jin Song

Department of Statistical Science, Baylor University, P.O. Box 97140, Waco, TX 76798-7140

Table S1: Spatial model parameter estimates for β_1 (non-spatial parameter estimates in parentheses)

$\sigma_{\phi,\tau}^2 = 0.1$				$\sigma_{\phi,\tau}^2 = 1$			
$\tau \backslash \alpha$	0.05	0.12	0.25	$\tau \backslash \alpha$	0.05	0.12	0.25
0.25	1.49(1.50)	1.50(1.49)	1.51(1.50)	0.25	1.49(1.48)	1.50(1.50)	1.52(1.51)
0.50	1.48(1.48)	1.51(1.51)	1.50(1.50)	0.50	1.49(1.48)	1.49(1.49)	1.51(1.52)
0.90	1.50(1.51)	1.50(1.50)	1.51(1.50)	0.90	1.48(1.49)	1.49(1.48)	1.50(1.53)

Table S2: Spatial model parameter estimates for β_2 (non-spatial parameter estimates in parentheses)

$\sigma_{\phi,\tau}^2 = 0.1$				$\sigma_{\phi,\tau}^2 = 1$			
$\tau \backslash \alpha$	0.05	0.12	0.25	$\tau \backslash \alpha$	0.05	0.12	0.25
0.25	-0.48(-0.48)	-0.51(-0.50)	-0.51(-0.51)	0.25	-0.46(-0.47)	-0.51(-0.51)	-0.51(-0.50)
0.50	-0.50(-0.50)	-0.51(-0.51)	-0.49(-0.49)	0.50	-0.51(-0.52)	-0.51(-0.51)	-0.48(-0.51)
0.90	-0.48(-0.49)	-0.50(-0.50)	-0.50(-0.48)	0.90	-0.48(-0.49)	-0.52(-0.52)	-0.49(-0.46)

Table S3: Parameter configurations from Figure 1

Plot	α	$\sigma_{\phi,\tau}^2$	τ	Plot	α	$\sigma_{\phi,\tau}^2$	τ	Plot	α	$\sigma_{\phi,\tau}^2$	τ
1	0.05	0.1	0.25	2	0.05	1	0.25	3	0.05	0.1	0.50
4	0.05	1	0.50	5	0.05	0.1	0.90	6	0.05	1	0.90
7	0.12	0.1	0.25	8	0.12	1	0.25	9	0.12	0.1	0.50
10	0.12	1	0.50	11	0.12	0.1	0.90	12	0.12	1	0.90
13	0.25	0.1	0.25	14	0.25	1	0.25	15	0.25	0.1	0.50
16	0.25	1	0.50	17	0.25	0.1	0.90	18	0.25	1	0.90