

Table 2 Adjusted associations of acute chest syndrome with residential characteristics (N=709).[§] Models 1-3 include a single residential characteristic, while Model 4 includes all 3 residential characteristics

	Model 1	Model 2	Model 3	Model 4
	IRR/RRR (95% CI)	IRR/RRR (95% CI)	IRR/RRR (95% CI)	IRR/RRR (95% CI)
Recurrent ACS vs non-recurrent ACS (No ACS + single ACS)				
High deprivation (ADI 7-10)	0.73 (0.55-0.97)*	--	--	0.76 (0.58–1.01)
≥90% AA neighborhood	--	0.57 (0.36–0.88)*	--	0.60 (0.39–0.94)*
Non-metro area (RUCA 4-10)	--	--	1.25 (0.90–1.74)	1.20 (0.87–1.65)

Recurrent ACS vs single ACS

High deprivation (ADI 7-10)	0.57 (0.34–0.98)*	--	--	0.61 (0.36–1.05)
≥90% AA neighborhood	--	0.43 (0.21–0.86)*	--	0.48 (0.24–0.96)*
Non-metro area (RUCA 4-10)	--	--	1.61 (0.79–3.28)	1.56 (0.75–3.23)

Recurrent ACS vs no ACS

High deprivation (ADI 7-10)	0.58 (0.36–0.96)*	--	--	0.62 (0.38–1.03)
≥90% AA neighborhood	--	0.41 (0.21–0.80)**	--	0.45 (0.23–0.88)*
Non-metro area (RUCA 4-10)	--	--	1.45 (0.80–2.62)	1.42 (0.77–2.61)

Single ACS vs no ACS

High deprivation (ADI 7-10)	1.02 (0.66–1.56)	--	--	1.01 (0.66–1.56)
≥90% AA neighborhood	--	0.95 (0.58–1.56)	--	0.93 (0.57–1.54)
Non-metro area (RUCA 4-10)	--	--	0.90 (0.51–1.60)	0.91 (0.51–1.62)

[§]Adjusted for age, sex, insurance type, BMI, chronic transfusions, hydroxyurea, asthma, and phenotype.

Boldface indicates statistical significance: **p<0.01, *p<0.05; two-tailed tests.

AA=African American; ACS=Acute Chest Syndrome; ADI=Area Deprivation Index; RUCA=Rural Urban Commuting Area