

Indicator 5: Mental Health -'Not Good'

Internal variable name: outc5_ng_ment_hlth

Definition: Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

Predictive models

	Mixed, demos only	Logit, no area effects	Mixed with area covariates
	b/se	b/se	b/se
Outcome 5: Mental Health -'Not Good'			
NH Black vs. NH White	-0.0597 (0.0914)	-0.0942 (0.0954)	-0.0942 (0.0902)
NH Asian vs. NH White	-0.1885 (0.2208)	-0.1974 (0.1850)	-0.1974 (0.2316)
NH Other vs. NH White	0.0462 (0.1397)	0.0348 (0.1585)	0.0348 (0.1390)
Hispanic vs. NH White	-0.6211*** (0.1314)	-0.6139*** (0.1572)	-0.6139*** (0.1331)
Female	0.5844*** (0.0608)	0.5786*** (0.0688)	0.5786*** (0.0605)
Age 18-34 vs. 65+	1.4909*** (0.0966)	1.4615*** (0.0923)	1.4615*** (0.0963)
Age 35-44 vs. 65+	1.1915*** (0.0944)	1.1855*** (0.1056)	1.1855*** (0.0955)
Age 45-54 vs. 65+	0.8175*** (0.0843)	0.8083*** (0.0935)	0.8083*** (0.0863)
Age 55-64 vs. 65+	0.6264*** (0.0798)	0.6230*** (0.0872)	0.6230*** (0.0797)
% age 75+		-0.0546* (0.0226)	-0.0546** (0.0174)
VA BRFSS 2014 SAE outc26_shingles_vacc		2.4116*** (0.7305)	2.4116*** (0.6171)
Drug overdose mortality rate, County Rankings/CDC		0.0584** (0.0182)	0.0584*** (0.0153)
VA BRFSS 2014 SAE outc39_curr_smoker		-3.1943*** (0.9254)	-3.1943*** (0.8525)
Food insecurity rate, County Rankings/Map the Meal Gap		0.4880** (0.1645)	0.4880*** (0.1328)
VA BRFSS 2014 SAE outc37_psa_test		-1.8808 (11.4912)	-1.8808 (10.9322)
c.VA14SAE_outc37_psa_test#c.VA14SAE_outc37_psa_test		2.8097 (9.4406)	2.8097 (8.7641)

% occupied HUs - renter-occupied		-0.0200** (0.0071)	-0.0200** (0.0063)
% below PL, White alone		-0.0023 (0.0301)	-0.0023 (0.0271)
c.ACS_pct_rent#c.ACS_pct_white_poor		0.0014 (0.0008)	0.0014* (0.0007)
Intercept	-1.8153*** (0.0826)	-2.1830 (3.5567)	-2.1830 (3.5179)
Area effect variance	0.0395 (0.0261)		0.0000 (0.0000)

Number of alternative models used to estimate model error = 15.

Results

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Augusta County	51015	45.8%	(34.1%, 58.0%)	28.3%	(25.5%, 31.3%)
Bath County	51017	19.6%	(4.9%, 58.8%)	21.8%	(17.1%, 27.3%)
Caroline County	51033	14.1%	(5.0%, 42.6%)	24.0%	(20.0%, 28.5%)
Clarke County	51043	45.0%	(21.0%, 71.6%)	26.2%	(23.6%, 29.0%)
Culpeper County	51047	30.6%	(16.3%, 49.9%)	24.2%	(21.8%, 26.8%)
Fauquier County	51061	39.0%	(24.4%, 56.0%)	27.3%	(24.5%, 30.4%)
Frederick County	51069	22.2%	(12.2%, 37.1%)	29.8%	(26.8%, 33.0%)
Highland County	51091	0.0%	(0.0%, 53.2%)	31.7%	(23.9%, 40.7%)
King George County	51099	55.4%	(25.0%, 82.2%)	25.6%	(22.3%, 29.2%)
Madison County	51113	24.0%	(9.9%, 47.6%)	17.2%	(13.8%, 21.1%)
Orange County	51137	19.9%	(7.7%, 42.6%)	25.7%	(23.3%, 28.2%)
Page County	51139	34.2%	(15.2%, 60.1%)	28.1%	(24.7%, 31.8%)
Rappahannock County	51157	18.4%	(5.5%, 46.6%)	25.9%	(22.3%, 30.0%)
Rockbridge County	51163	37.3%	(20.7%, 57.5%)	29.7%	(25.7%, 34.1%)
Rockingham County	51165	36.2%	(24.9%, 49.3%)	29.9%	(26.0%, 34.0%)
Shenandoah County	51171	17.4%	(7.9%, 34.2%)	20.2%	(17.6%, 23.1%)
Spotsylvania County	51177	29.3%	(19.4%, 41.5%)	25.0%	(22.1%, 28.3%)
Stafford County	51179	22.2%	(14.8%, 31.8%)	29.8%	(26.6%, 33.2%)
Warren County	51187	52.8%	(32.7%, 72.1%)	34.3%	(31.0%, 37.8%)
Buena Vista City	51530	34.1%	(8.5%, 74.4%)	59.4%	(48.7%, 69.3%)
Fredericksburg City	51630	35.8%	(16.7%, 60.6%)	40.7%	(33.4%, 48.5%)
Harrisonburg City	51660	49.1%	(16.2%, 82.8%)	39.4%	(31.7%, 47.7%)
Lexington City	51678	0.0%	(0.0%, 96.3%)	50.7%	(41.8%, 59.6%)
Staunton City	51790	42.5%	(12.1%, 79.9%)	31.6%	(27.8%, 35.6%)
Waynesboro City	51820	25.7%	(5.9%, 65.5%)	33.2%	(29.2%, 37.5%)
Winchester City	51840	10.9%	(3.2%, 65.8%)	26.3%	(17.9%, 36.9%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Albemarle County	51003	26.3%	(17.6%, 37.4%)	30.5%	(27.5%, 33.6%)
Alleghany County	51005	16.3%	(6.4%, 35.6%)	26.2%	(22.5%, 30.3%)
Amherst County	51009	23.2%	(10.3%, 44.3%)	28.1%	(24.9%, 31.5%)
Appomattox County	51011	30.5%	(12.9%, 56.6%)	32.2%	(23.5%, 42.2%)
Arlington City	51013	34.6%	(25.1%, 45.5%)	31.3%	(27.2%, 35.7%)
Bedford County	51019	29.2%	(19.3%, 41.6%)	28.5%	(25.5%, 31.7%)
Botetourt County	51023	13.4%	(4.6%, 33.5%)	30.7%	(26.4%, 35.3%)
Campbell County	51031	28.8%	(18.1%, 42.6%)	31.2%	(27.8%, 34.9%)
Craig County	51045	47.5%	(8.4%, 89.9%)	34.2%	(28.7%, 40.2%)
Fairfax County	51059	32.3%	(28.5%, 36.5%)	26.8%	(25.3%, 28.3%)
Fluvanna County	51065	14.5%	(4.4%, 38.1%)	29.5%	(25.4%, 34.1%)
Greene County	51079	67.6%	(38.5%, 87.4%)	36.2%	(32.2%, 40.4%)
Loudoun County	51107	36.1%	(28.5%, 44.5%)	30.4%	(27.7%, 33.2%)
Louisa County	51109	34.1%	(18.1%, 54.8%)	28.2%	(24.9%, 31.6%)
Nelson County	51125	29.3%	(9.8%, 61.2%)	25.7%	(22.9%, 28.7%)
Prince William County	51153	33.7%	(27.4%, 40.7%)	28.0%	(25.8%, 30.3%)
Roanoke County	51161	31.4%	(22.2%, 42.3%)	23.5%	(21.1%, 26.1%)
Alexandria City	51510	36.7%	(26.1%, 48.7%)	28.2%	(23.6%, 33.4%)
Charlottesville City	51540	18.1%	(8.4%, 34.8%)	32.4%	(27.0%, 38.3%)
Covington City	51580	100.0%	(12.6%, 100.0%)	61.6%	(39.6%, 79.7%)
Fairfax City	51600	27.6%	(17.7%, 40.2%)	22.5%	(18.5%, 27.1%)
Falls Church City	51610	38.4%	(16.7%, 66.0%)	36.7%	(31.6%, 42.0%)
Lynchburg City	51680	41.9%	(29.1%, 55.9%)	32.6%	(27.4%, 38.3%)
Manassas City	51683	25.5%	(9.8%, 51.8%)	22.8%	(19.2%, 26.7%)
Manassas Park City	51685	0.0%	(0.0%, 76.5%)	28.3%	(23.5%, 33.6%)
Salem City	51775	50.3%	(17.7%, 82.7%)	32.1%	(29.1%, 35.3%)

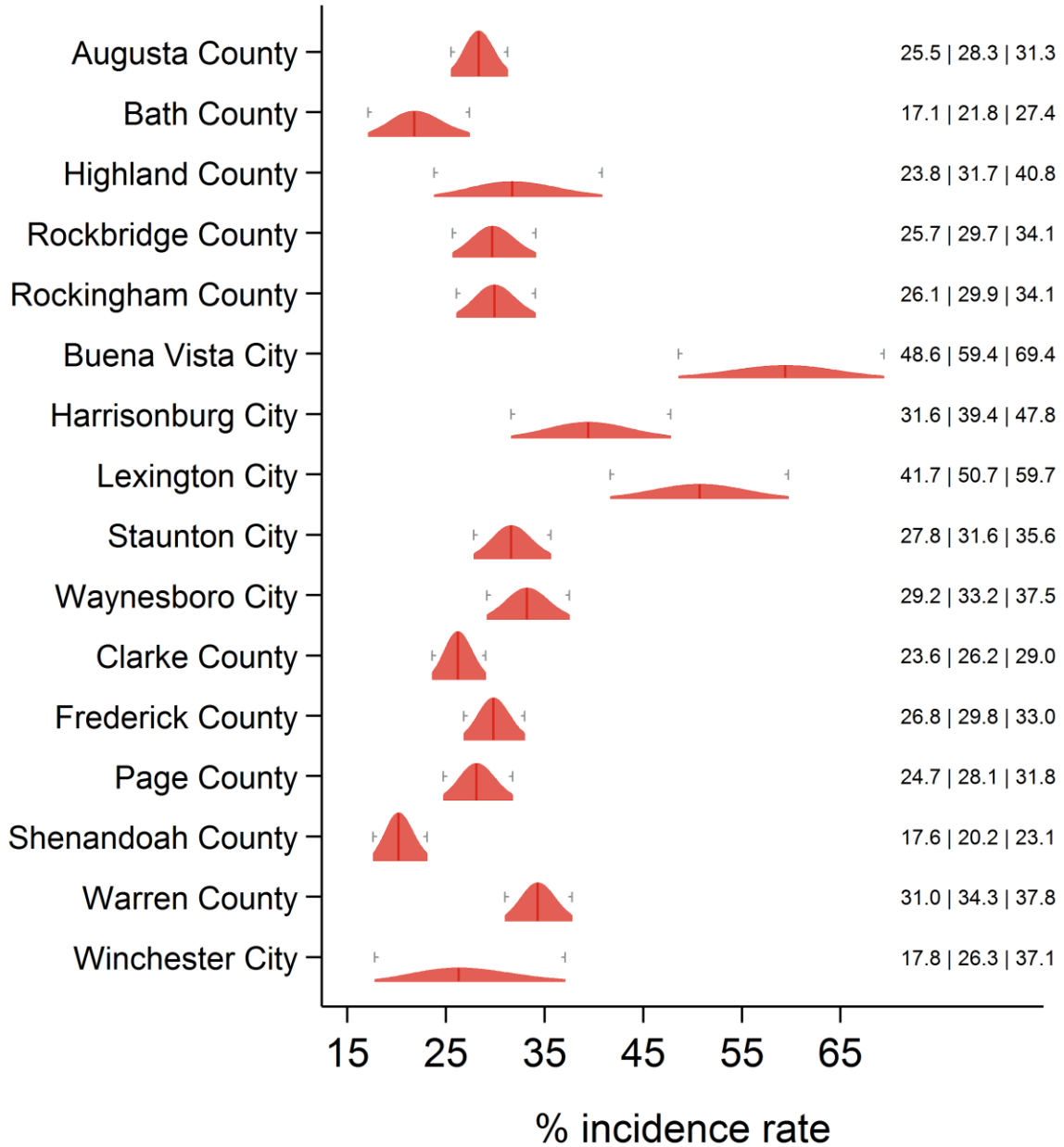
County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Bland County	51021	14.3%	(5.0%, 50.7%)	28.1%	(22.5%, 34.5%)
Buchanan County	51027	48.3%	(26.7%, 70.5%)	35.9%	(29.1%, 43.3%)
Carroll County	51035	35.0%	(18.6%, 56.0%)	19.5%	(16.0%, 23.5%)
Dickenson County	51051	73.3%	(51.6%, 87.6%)	53.8%	(45.3%, 62.1%)
Floyd County	51063	22.5%	(9.9%, 43.3%)	23.8%	(19.9%, 28.3%)
Franklin County	51067	24.8%	(11.1%, 46.3%)	29.7%	(26.9%, 32.7%)
Giles County	51071	43.4%	(26.9%, 61.6%)	38.4%	(34.2%, 42.8%)
Grayson County	51077	11.9%	(3.9%, 31.4%)	26.0%	(21.2%, 31.5%)
Henry County	51089	27.8%	(15.7%, 44.3%)	27.2%	(23.7%, 30.9%)
Lee County	51105	32.5%	(13.8%, 59.1%)	37.5%	(31.1%, 44.4%)
Montgomery County	51121	51.5%	(38.4%, 64.5%)	40.5%	(35.8%, 45.3%)
Patrick County	51141	45.6%	(19.8%, 74.0%)	24.4%	(19.5%, 30.2%)
Pittsylvania County	51143	29.5%	(20.3%, 40.6%)	25.3%	(22.6%, 28.2%)
Pulaski County	51155	46.4%	(26.7%, 67.2%)	31.0%	(25.5%, 37.0%)
Russell County	51167	29.9%	(16.3%, 48.4%)	32.4%	(27.8%, 37.4%)
Scott County	51169	24.6%	(12.2%, 43.4%)	32.1%	(26.7%, 38.1%)
Smyth County	51173	18.6%	(8.7%, 35.4%)	21.7%	(17.7%, 26.5%)
Tazewell County	51185	33.0%	(19.1%, 50.7%)	33.5%	(29.2%, 38.1%)
Washington County	51191	21.7%	(13.1%, 33.8%)	23.8%	(21.3%, 26.4%)
Wise County	51195	54.9%	(39.4%, 69.6%)	45.7%	(40.1%, 51.5%)
Wythe County	51197	24.3%	(11.5%, 44.2%)	27.4%	(23.8%, 31.3%)
Bristol City	51520	22.0%	(2.3%, 76.7%)	33.1%	(27.4%, 39.3%)
Danville City	51590	17.6%	(6.6%, 39.2%)	24.4%	(18.6%, 31.1%)
Galax City	51640	70.7%	(15.6%, 96.9%)	41.1%	(31.5%, 51.5%)
Martinsville City	51690	70.0%	(30.9%, 92.4%)	28.9%	(14.6%, 49.1%)
Norton City	51720	82.1%	(27.2%, 95.9%)	56.1%	(35.7%, 74.6%)
Radford City	51750	67.5%	(35.8%, 88.6%)	39.4%	(27.4%, 52.9%)
Roanoke City	51770	53.0%	(40.6%, 65.0%)	39.6%	(35.0%, 44.4%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Amelia County	51007	38.0%	(15.6%, 67.0%)	28.0%	(24.3%, 32.0%)
Brunswick County	51025	11.2%	(4.4%, 34.5%)	21.6%	(17.3%, 26.8%)
Buckingham County	51029	31.4%	(15.8%, 52.8%)	32.2%	(26.9%, 38.1%)
Charles City County	51036	50.1%	(14.2%, 85.9%)	39.2%	(33.7%, 45.0%)
Charlotte County	51037	42.4%	(24.3%, 62.9%)	26.0%	(23.1%, 29.2%)
Chesterfield County	51041	41.1%	(33.1%, 49.5%)	32.1%	(29.5%, 34.7%)
Cumberland County	51049	24.3%	(10.3%, 47.4%)	25.3%	(19.6%, 31.9%)
Dinwiddie County	51053	28.7%	(13.6%, 50.6%)	28.7%	(24.7%, 33.2%)
Goochland County	51075	32.2%	(13.9%, 58.3%)	28.8%	(24.7%, 33.3%)
Greensville County	51081	29.1%	(7.9%, 66.3%)	21.2%	(16.4%, 26.9%)
Halifax County	51083	23.4%	(13.1%, 38.2%)	22.9%	(19.9%, 26.0%)
Hanover County	51085	32.5%	(21.6%, 45.6%)	28.6%	(25.3%, 32.2%)
Henrico County	51087	34.4%	(26.6%, 43.2%)	31.9%	(29.7%, 34.2%)
Lunenburg County	51111	14.4%	(7.2%, 41.9%)	20.2%	(17.4%, 23.4%)
Mecklenburg County	51117	29.8%	(18.1%, 44.9%)	22.6%	(19.3%, 26.2%)
New Kent County	51127	34.0%	(15.2%, 59.7%)	36.3%	(28.4%, 44.9%)
Nottoway County	51135	48.6%	(20.6%, 77.6%)	34.9%	(30.2%, 39.9%)
Powhatan County	51145	41.7%	(20.7%, 66.1%)	32.4%	(25.1%, 40.7%)
Prince Edward County	51147	28.1%	(15.4%, 45.8%)	35.3%	(30.8%, 40.1%)
Prince George County	51149	21.4%	(11.5%, 36.3%)	25.5%	(22.6%, 28.6%)
Surry County	51181	45.3%	(17.1%, 77.0%)	18.8%	(14.3%, 24.4%)
Sussex County	51183	19.1%	(7.0%, 42.5%)	21.5%	(17.0%, 26.8%)
Colonial Heights City	51570	36.7%	(17.4%, 61.4%)	35.3%	(28.9%, 42.3%)
Emporia City	51595	100.0%	(8.2%, 100.0%)	48.0%	(27.2%, 69.5%)
Hopewell City	51670	40.0%	(18.8%, 65.8%)	50.0%	(43.4%, 56.6%)
Petersburg City	51730	58.9%	(41.7%, 74.2%)	53.9%	(45.5%, 62.1%)
Richmond City	51760	46.1%	(34.7%, 57.9%)	38.8%	(34.6%, 43.2%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Accomack County	51001	30.1%	(18.2%, 45.6%)	30.5%	(26.5%, 34.9%)
Essex County	51057	49.7%	(23.4%, 76.1%)	23.8%	(20.8%, 27.1%)
Gloucester County	51073	36.3%	(23.5%, 51.2%)	25.0%	(22.0%, 28.4%)
Isle of Wight County	51093	38.7%	(20.5%, 60.6%)	30.3%	(27.5%, 33.2%)
James City County	51095	27.4%	(16.7%, 41.7%)	24.2%	(21.2%, 27.4%)
King and Queen County	51097	38.8%	(14.4%, 70.5%)	26.2%	(22.0%, 30.8%)
King William County	51101	33.5%	(12.3%, 64.4%)	32.3%	(28.5%, 36.3%)
Lancaster County	51103	37.6%	(8.5%, 79.7%)	22.7%	(17.1%, 29.6%)
Mathews County	51115	23.0%	(7.2%, 53.4%)	19.8%	(16.3%, 23.9%)
Middlesex County	51119	25.3%	(9.5%, 52.1%)	22.6%	(18.7%, 27.0%)
Northampton County	51131	30.4%	(14.2%, 53.6%)	20.3%	(17.1%, 23.9%)
Northumberland County	51133	33.7%	(16.9%, 56.0%)	23.6%	(18.1%, 30.2%)
Richmond County	51159	47.4%	(23.5%, 72.4%)	25.4%	(19.6%, 32.2%)
Southampton County	51175	25.7%	(8.1%, 57.4%)	22.6%	(20.2%, 25.2%)
Westmoreland County	51193	15.8%	(5.5%, 38.0%)	20.0%	(17.1%, 23.2%)
York County	51199	39.1%	(25.7%, 54.4%)	33.0%	(30.0%, 36.1%)
Chesapeake City	51550	34.8%	(26.0%, 44.6%)	31.2%	(29.1%, 33.4%)
Franklin City	51620	5.9%	(3.3%, 30.9%)	15.9%	(11.5%, 21.4%)
Hampton City	51650	36.4%	(27.7%, 46.0%)	29.8%	(27.1%, 32.7%)
Newport News City	51700	41.8%	(31.6%, 52.7%)	32.8%	(30.3%, 35.3%)
Norfolk City	51710	42.1%	(33.3%, 51.3%)	38.4%	(35.2%, 41.7%)
Poquoson City	51735	61.3%	(15.5%, 93.2%)	38.4%	(31.8%, 45.4%)
Portsmouth City	51740	28.5%	(19.6%, 39.4%)	32.9%	(29.6%, 36.2%)
Suffolk City	51800	41.7%	(29.0%, 55.6%)	30.8%	(28.0%, 33.8%)
Virginia Beach City	51810	31.5%	(25.1%, 38.6%)	30.4%	(28.6%, 32.3%)
Williamsburg City	51830	68.6%	(28.9%, 92.1%)	55.6%	(44.4%, 66.2%)

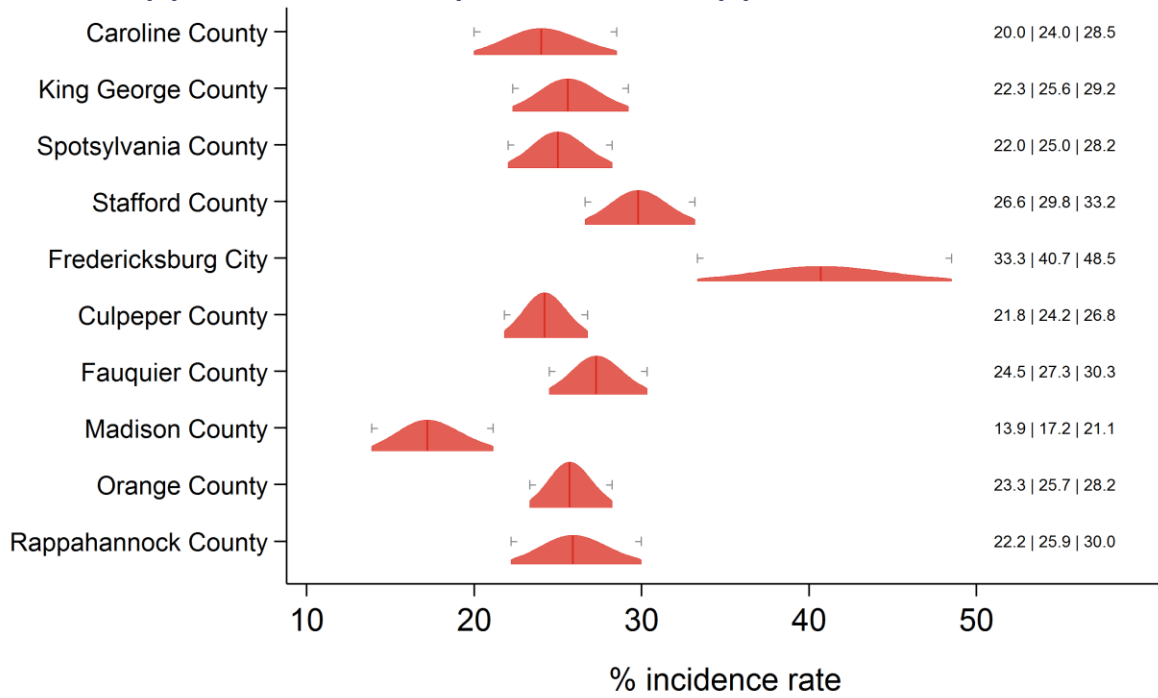
Graphical representation

Mental Health - 'Not Good' Central Shenandoah and Lord Fairfax HDs



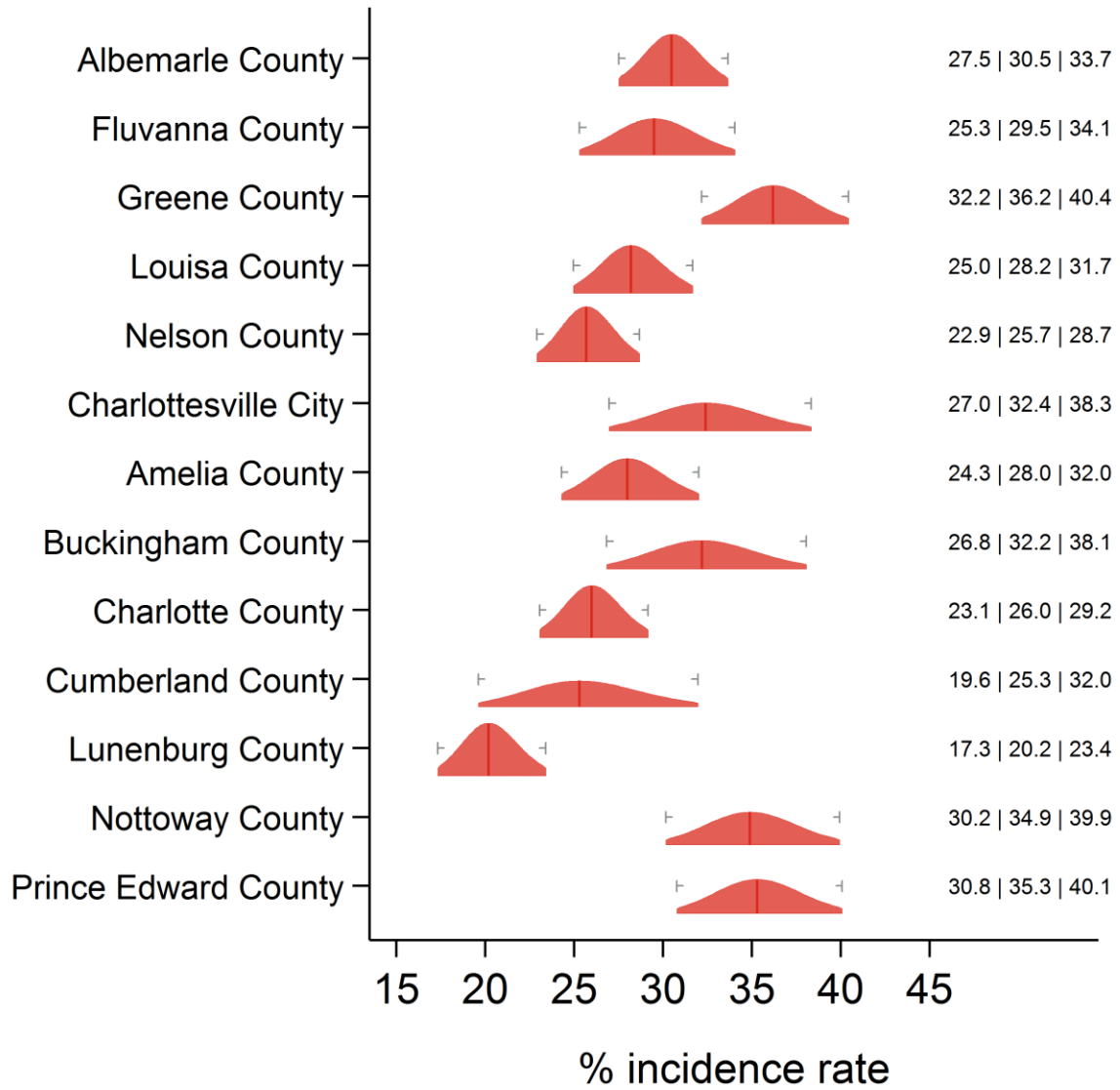
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Mental Health - 'Not Good' Rappahannock/Rapidan and Rappahannock HDs



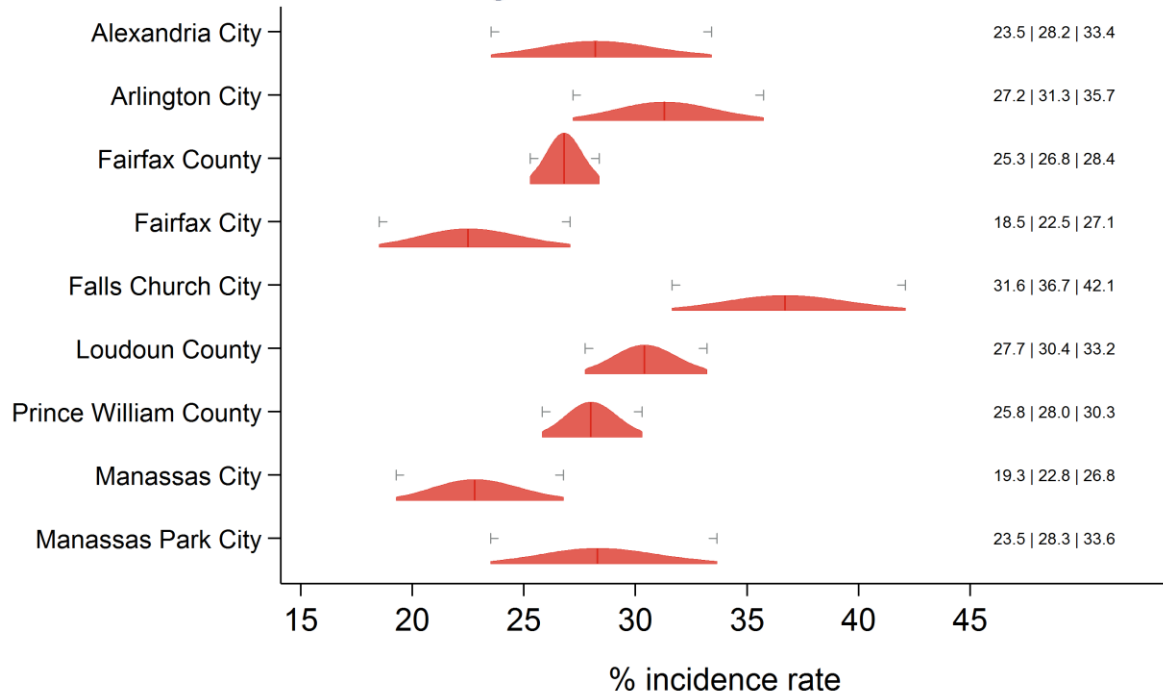
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Mental Health - 'Not Good' Thomas Jefferson and Piedmont HDs



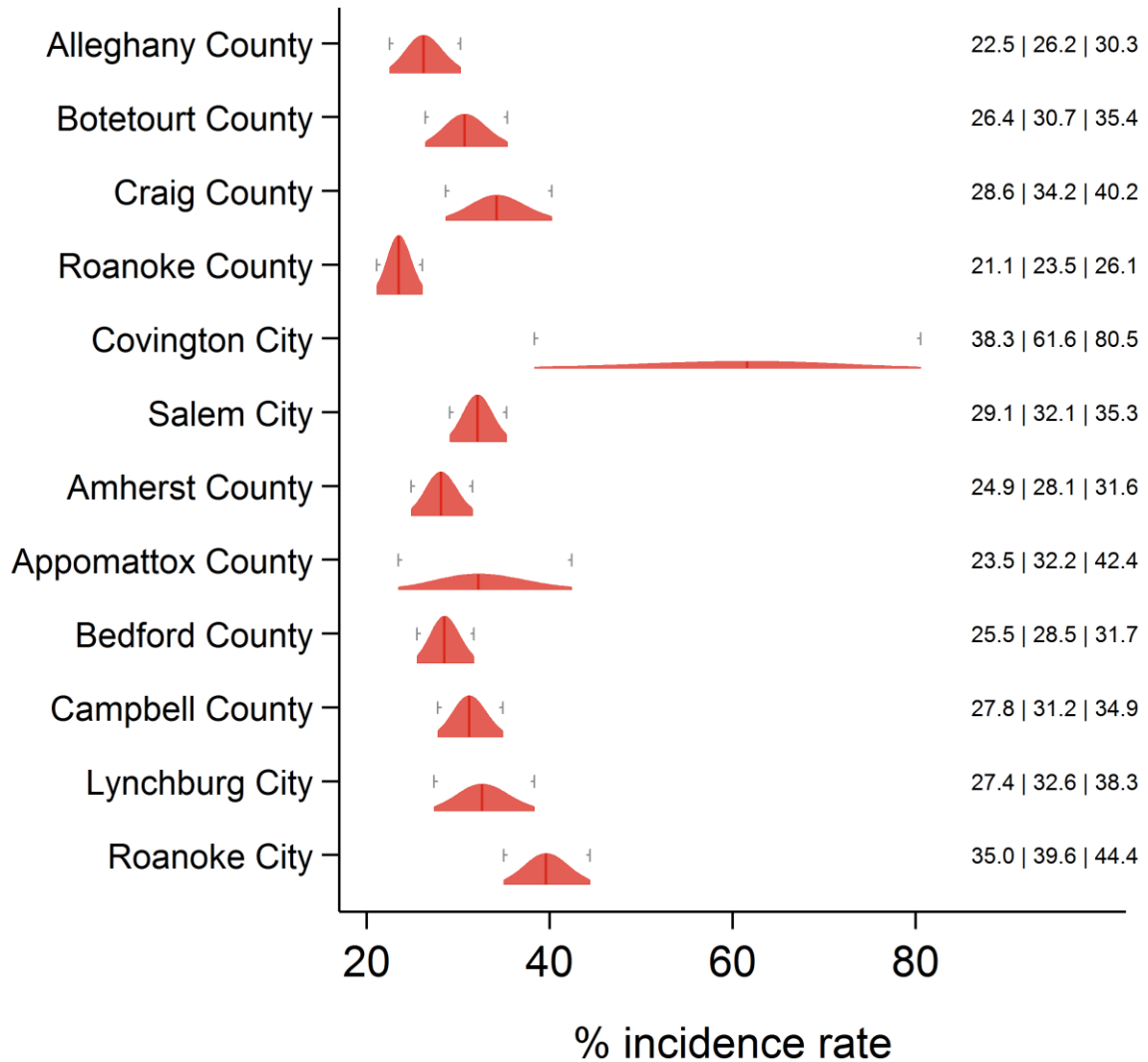
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Mental Health - 'Not Good' Alexandria, Fairfax, Arlington, Loudon, Prince William HDs



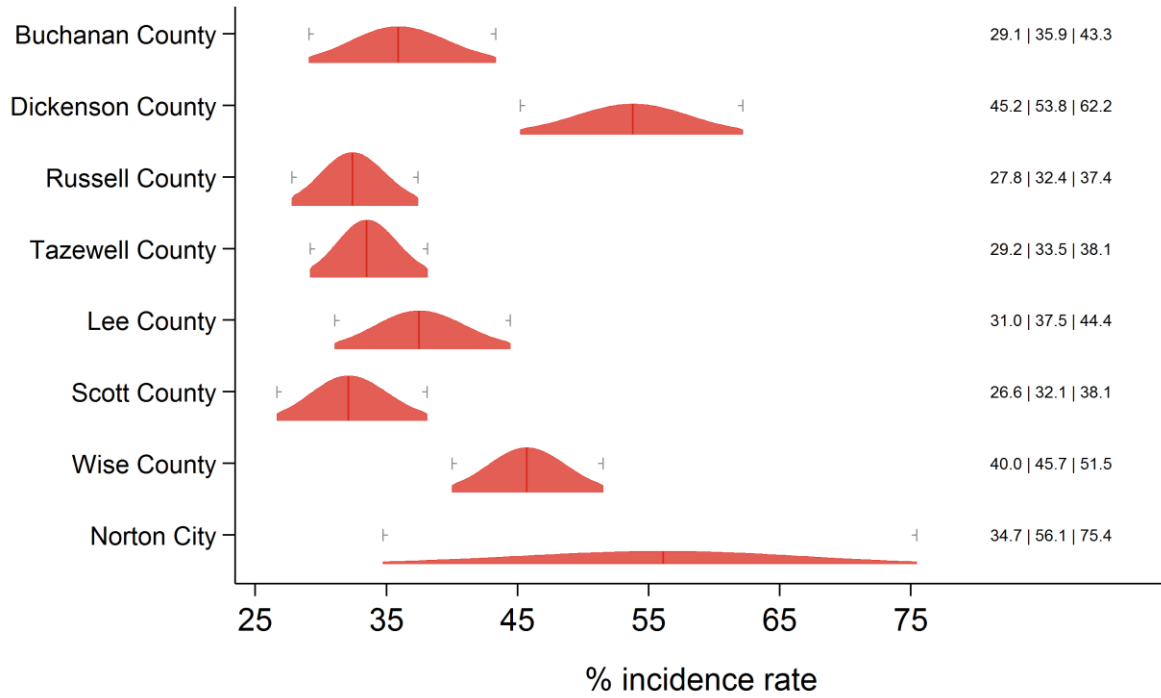
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Mental Health - 'Not Good' Alleghany, Roanoke and Central Virginia HDs



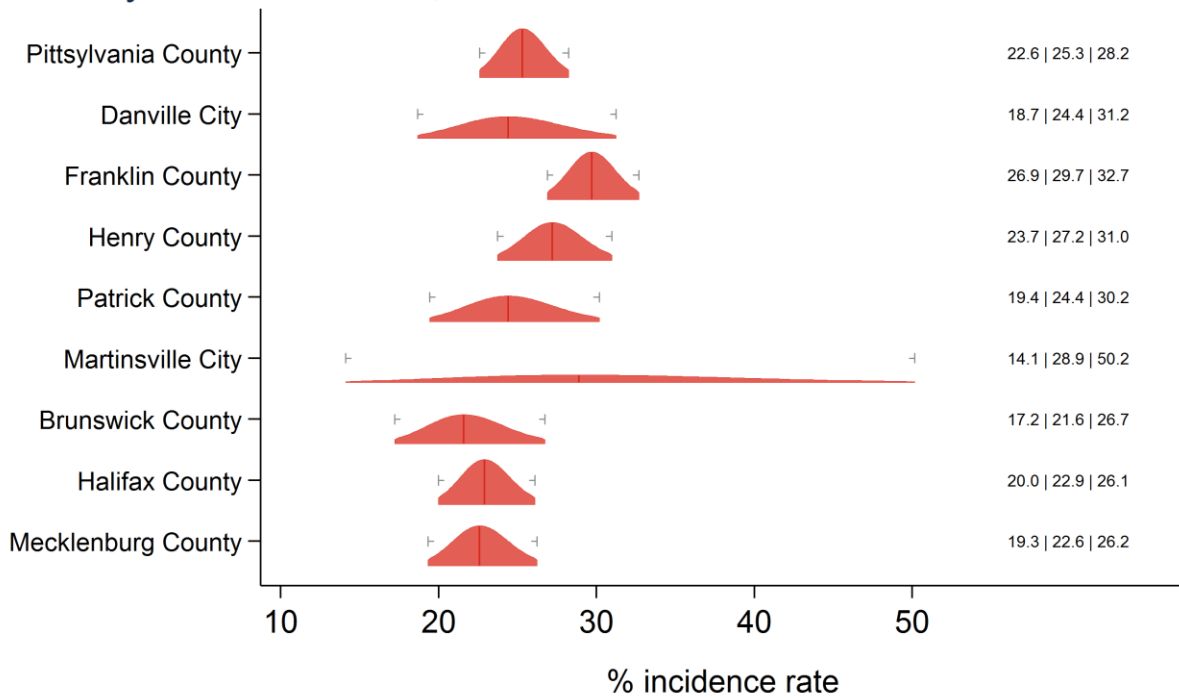
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Mental Health - 'Not Good' Cumberland Plateau and Lenowisco HDs



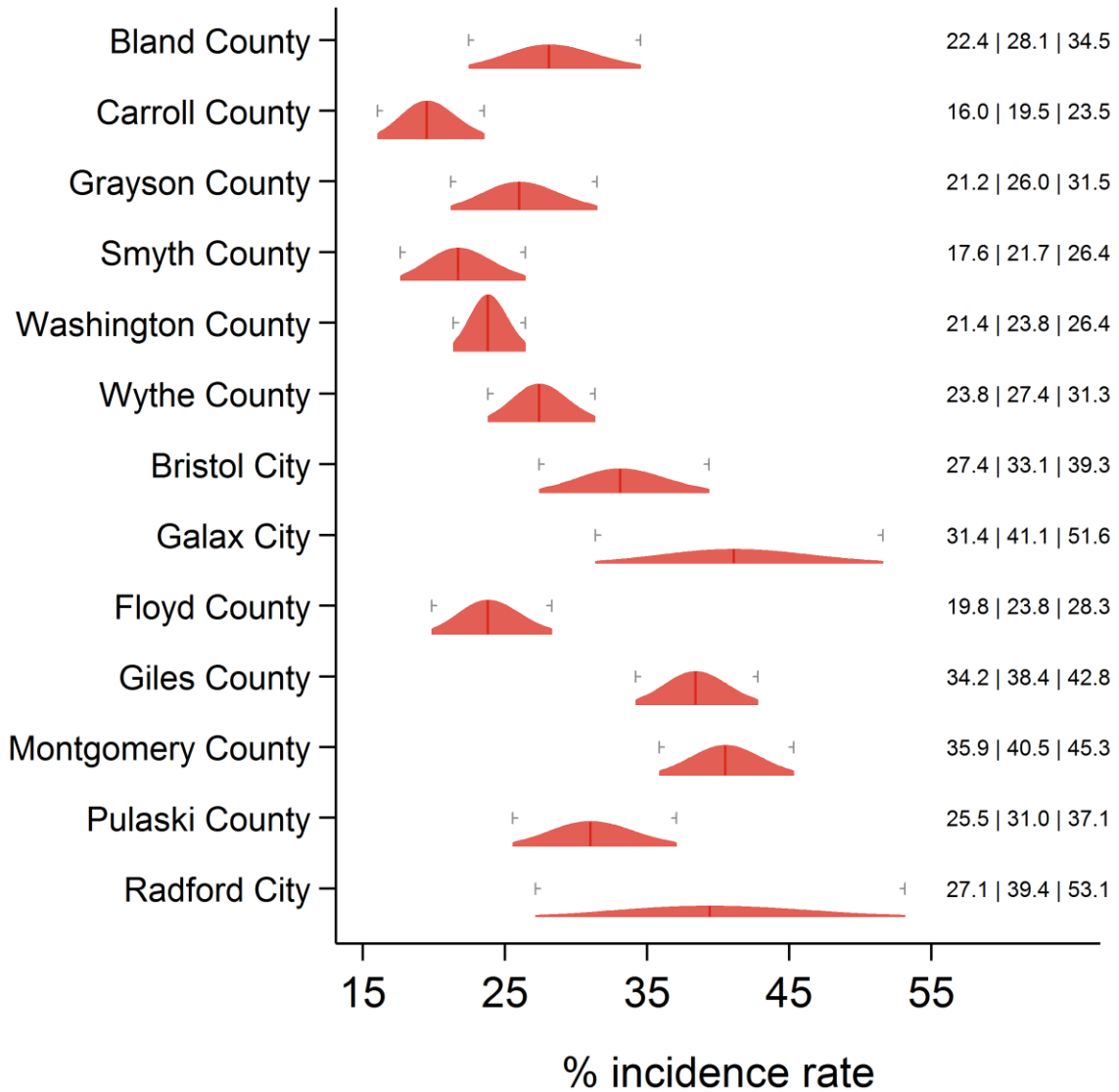
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Mental Health -'Not Good' Pittsylvania/Danville, Southside and West Piedmont HDs



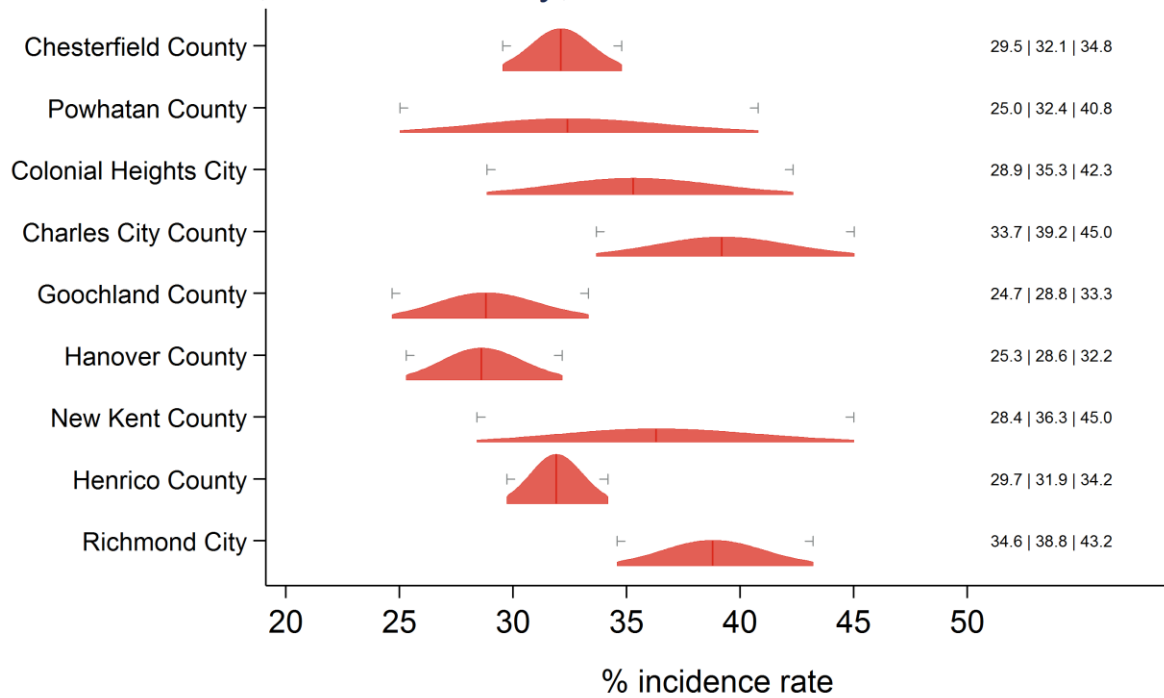
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Mental Health - 'Not Good' New River and Mount Rogers HDs



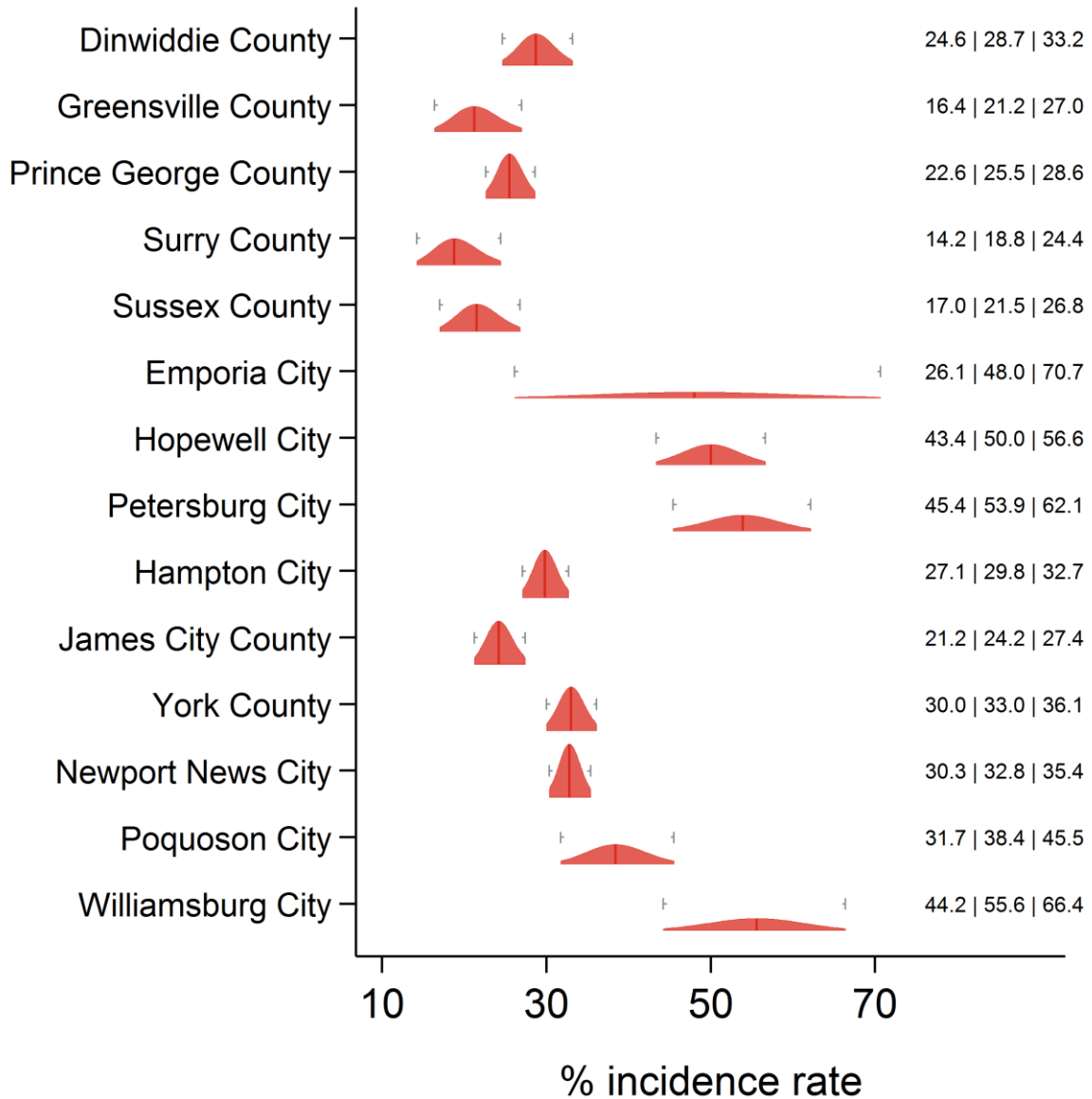
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Mental Health -'Not Good' Chesterfield, Chickahominy, Henrico and Richmond HDs



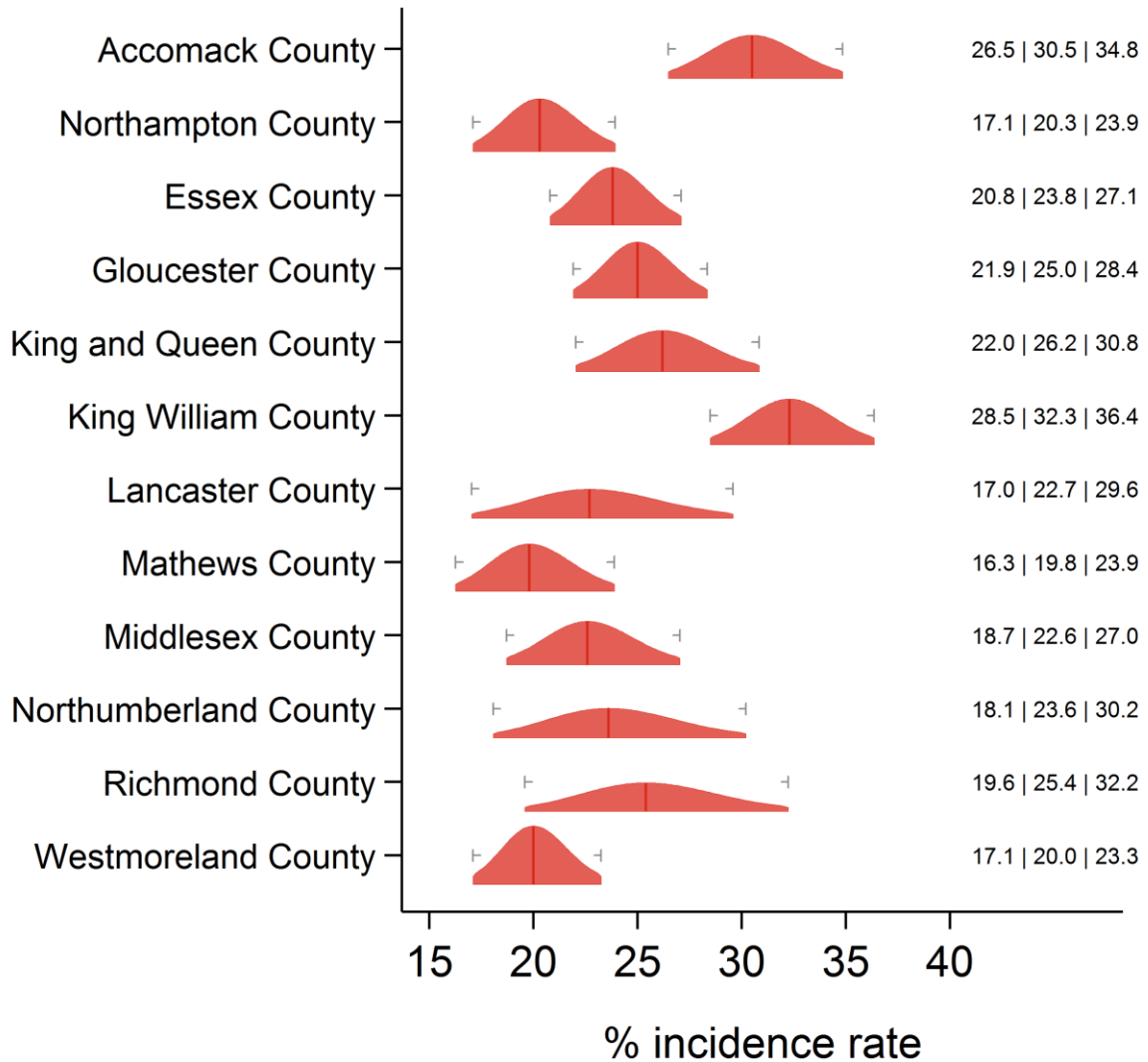
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Mental Health - 'Not Good' Crater, Peninsula and Hampton HDs



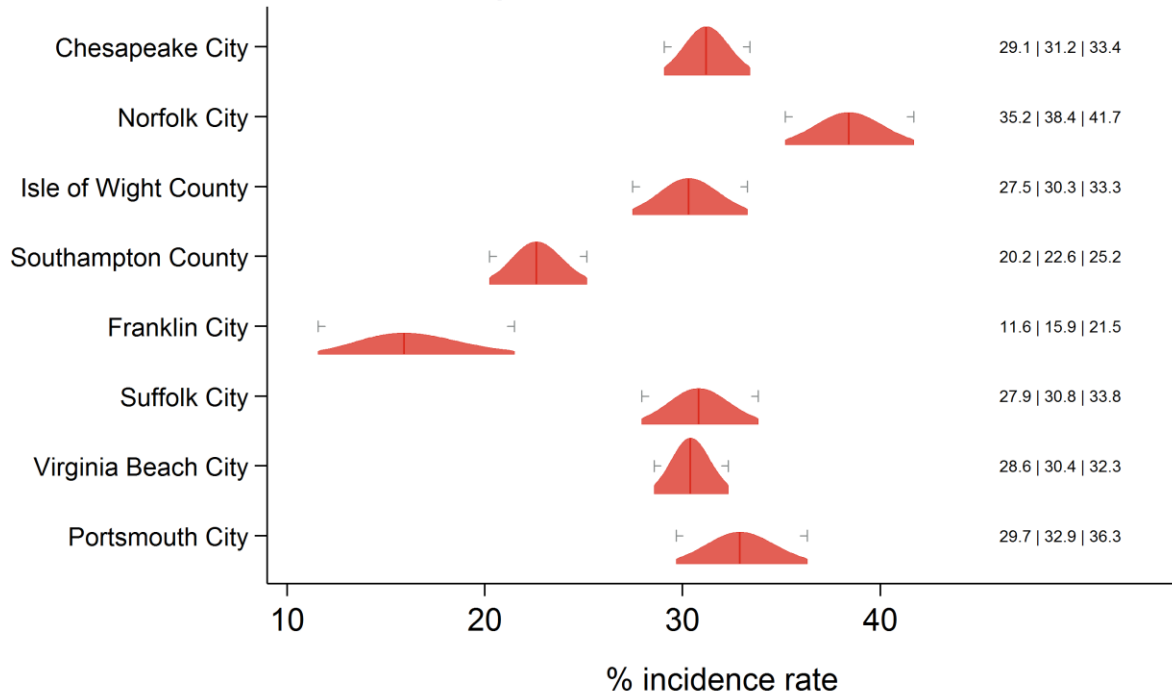
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Mental Health - 'Not Good' Eastern Shore and Three Rivers HDs



Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Mental Health -'Not Good' Norfolk,Portsmouth,Chesapeake,VA Beach,W. Tidewater HDs



Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Additional diagnostics

Direct estimate is inside the 95% SAE Wilson CI: 30 areas.

Direct estimate is outside the 95% SAE Wilson CI: 103 areas.

SAE estimate is inside the 95% direct Wilson CI: 127 areas.

SAE estimate is outside the 95% direct Wilson CI: 6 areas.

SAE Wilson 95% CI is fully inside the 95% direct Wilson CI: 101 areas.

SAE Wilson 95% CI partially overlaps with the 95% direct Wilson CI: 32 areas.

SAE Wilson 95% CI and the 95% direct Wilson CI do not overlap: 0 areas.

SAE standard error is less than the direct standard error: 128 areas.

SAE standard error is greater than the (nonzero) direct standard error: 0 areas.

Direct standard error is zero: 5 areas.

Proportion of SAE variance due to ACS sampling error: min = 0.30%; med = 6.49%; max = 20.84%.

Proportion of SAE variance due to sampling error in regression coefficient estimates: min = 72.43%; med = 88.57%; max = 98.59%.

Proportion of SAE variance due to model selection: min = 0.46%; med = 3.16%; max = 21.57%.

Proportion of SAE variance due to area random effects: <identically zero>