

Indicator 10: current smoker

Internal variable name: outc10_curr_smoker

Definition: Four-level smoker status: Everyday smoker, Someday smoker, Former smoker, Non-smoker

Predictive models

	Mixed, demos only	Logit, no area effects	Mixed with area covariates
	b/se	b/se	b/se
Outcome 18: current smoker			
NH Black vs. NH White	-0.1292 (0.1429)	-0.1695 (0.1304)	-0.1695 (0.1405)
NH Asian vs. NH White	-0.6838* (0.3181)	-0.5246 (0.3637)	-0.5246 (0.2977)
NH Other vs. NH White	-0.1460 (0.2199)	-0.1199 (0.2167)	-0.1199 (0.2160)
Hispanic vs. NH White	-1.0076** (0.3081)	-0.9505*** (0.2540)	-0.9505** (0.3140)
Female	-0.1798 (0.1358)	-0.1803 (0.0958)	-0.1803 (0.1355)
Age 18-34 vs. 65+	0.7102*** (0.1263)	0.7364*** (0.1472)	0.7364*** (0.1264)
Age 35-44 vs. 65+	1.0228*** (0.1707)	1.0420*** (0.1551)	1.0420*** (0.1707)
Age 45-54 vs. 65+	0.9531*** (0.1612)	0.9572*** (0.1462)	0.9572*** (0.1627)
Age 55-64 vs. 65+	0.6390*** (0.1219)	0.6498*** (0.1376)	0.6498*** (0.1239)
% education Bachelor+, population 25+ y/o		-0.0224* (0.0094)	-0.0224*** (0.0063)
% speaking English less than very well		0.0944** (0.0344)	0.0944*** (0.0242)
% Hispanic/Latino head receiving SNAP		-0.0313* (0.0159)	-0.0313** (0.0112)
% non-inst group quarter pop, 2010 Census		-0.0553** (0.0204)	-0.0553*** (0.0105)
Arthritis hospitalization rate per 1K		-0.1238* (0.0545)	-0.1238** (0.0402)
% education below HS, population 25+ y/o		-0.0791** (0.0271)	-0.0791*** (0.0193)
Melanoma Male Rate		-0.0157 (0.0083)	-0.0157* (0.0062)
c.ACS_pct_educ_lt_HS#c.MelanomaMaleRate		0.0006 (0.0006)	0.0006 (0.0004)

Socio-economic factors z-score, County Rankings		1.8482*** (0.5487)	1.8482*** (0.3840)
VA BRFSS 2014 SAE outc7_heart_attack		9.5607*** (2.7796)	9.5607*** (2.4426)
c.CHR_SES_Z#c.VA14SAE_outc7_heart_attack		-14.4132* (6.4916)	-14.4132** (4.3540)
Intercept	-2.4535*** (0.1161)	-0.5799 (0.6270)	-0.5799 (0.4349)
Area effect variance	0.2463** (0.0844)		0.0000 (0.0000)

Number of alternative models used to estimate model error = 8.

Results

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Augusta County	51015	16.5%	(9.4%, 27.4%)	14.4%	(12.1%, 17.0%)
Bath County	51017	15.7%	(2.2%, 61.0%)	22.1%	(16.4%, 29.2%)
Caroline County	51033	14.6%	(5.4%, 42.9%)	14.3%	(12.4%, 16.3%)
Clarke County	51043	19.5%	(5.9%, 48.5%)	4.8%	(3.5%, 6.5%)
Culpeper County	51047	5.4%	(1.7%, 15.8%)	8.3%	(6.6%, 10.3%)
Fauquier County	51061	8.8%	(3.2%, 21.7%)	9.2%	(7.6%, 11.1%)
Frederick County	51069	8.3%	(3.1%, 20.0%)	10.8%	(9.5%, 12.3%)
Highland County	51091	9.8%	(2.2%, 60.1%)	41.1%	(22.7%, 62.3%)
King George County	51099	7.3%	(1.1%, 35.8%)	9.9%	(7.8%, 12.5%)
Madison County	51113	0.0%	(0.0%, 22.9%)	12.3%	(10.3%, 14.5%)
Orange County	51137	8.9%	(2.8%, 24.5%)	14.6%	(12.1%, 17.5%)
Page County	51139	15.8%	(6.7%, 39.1%)	10.6%	(8.1%, 13.7%)
Rappahannock County	51157	9.8%	(1.5%, 44.2%)	6.7%	(5.3%, 8.4%)
Rockbridge County	51163	22.6%	(9.3%, 45.4%)	16.0%	(14.0%, 18.2%)
Rockingham County	51165	8.9%	(3.9%, 19.1%)	10.3%	(8.2%, 12.8%)
Shenandoah County	51171	5.9%	(2.7%, 19.3%)	16.9%	(14.4%, 19.8%)
Spotsylvania County	51177	13.8%	(7.6%, 23.8%)	11.3%	(9.9%, 12.8%)
Stafford County	51179	11.8%	(6.6%, 20.3%)	8.9%	(7.6%, 10.3%)
Warren County	51187	13.7%	(5.9%, 28.6%)	12.3%	(10.2%, 14.8%)
Buena Vista City	51530	0.0%	(0.0%, 45.0%)	24.7%	(16.3%, 35.6%)
Fredericksburg City	51630	5.9%	(2.9%, 27.3%)	6.0%	(4.5%, 8.0%)
Harrisonburg City	51660	0.0%	(0.0%, 46.2%)	3.9%	(2.4%, 6.4%)
Lexington City	51678	0.0%	(0.0%, 96.3%)	0.2%	(0.0%, 2.2%)
Staunton City	51790	0.0%	(0.0%, 43.5%)	8.7%	(5.6%, 13.4%)
Waynesboro City	51820	17.5%	(3.6%, 54.6%)	13.5%	(11.6%, 15.6%)
Winchester City	51840	7.5%	(2.3%, 64.0%)	11.4%	(8.8%, 14.6%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Albemarle County	51003	7.4%	(3.4%, 15.4%)	5.1%	(4.1%, 6.3%)
Alleghany County	51005	11.6%	(3.0%, 35.4%)	11.4%	(9.1%, 14.3%)
Amherst County	51009	10.6%	(3.1%, 30.3%)	12.2%	(10.1%, 14.6%)
Appomattox County	51011	10.9%	(3.6%, 32.7%)	12.1%	(10.3%, 14.1%)
Arlington City	51013	2.2%	(0.7%, 6.9%)	2.7%	(1.7%, 4.1%)
Bedford County	51019	8.9%	(4.1%, 18.3%)	10.6%	(9.3%, 12.0%)
Botetourt County	51023	6.5%	(1.3%, 27.7%)	10.1%	(8.3%, 12.2%)
Campbell County	51031	15.8%	(8.5%, 27.2%)	16.6%	(14.7%, 18.8%)
Craig County	51045	16.8%	(1.9%, 67.9%)	20.2%	(16.3%, 24.7%)
Fairfax County	51059	6.0%	(4.2%, 8.4%)	5.2%	(4.6%, 5.8%)
Fluvanna County	51065	2.2%	(1.0%, 18.6%)	8.3%	(7.0%, 9.7%)
Greene County	51079	16.7%	(3.6%, 52.3%)	7.8%	(6.1%, 9.9%)
Loudoun County	51107	2.5%	(1.1%, 5.8%)	3.9%	(3.2%, 4.8%)
Louisa County	51109	3.6%	(0.6%, 18.8%)	8.3%	(6.7%, 10.3%)
Nelson County	51125	41.1%	(15.1%, 73.2%)	11.1%	(8.6%, 14.3%)
Prince William County	51153	10.7%	(7.0%, 16.0%)	8.2%	(6.8%, 9.9%)
Roanoke County	51161	13.6%	(7.6%, 23.1%)	8.1%	(6.7%, 9.6%)
Alexandria City	51510	6.0%	(2.0%, 16.9%)	7.0%	(5.9%, 8.2%)
Charlottesville City	51540	14.6%	(6.0%, 31.4%)	7.9%	(5.8%, 10.7%)
Covington City	51580	0.0%	(0.0%, 87.4%)	3.1%	(0.8%, 11.2%)
Fairfax City	51600	8.4%	(3.7%, 18.0%)	7.5%	(6.0%, 9.3%)
Falls Church City	51610	0.0%	(0.0%, 26.3%)	2.2%	(1.4%, 3.4%)
Lynchburg City	51680	9.3%	(3.8%, 20.8%)	8.5%	(7.1%, 10.2%)
Manassas City	51683	7.9%	(3.2%, 40.5%)	8.3%	(5.6%, 12.1%)
Manassas Park City	51685	0.0%	(0.0%, 76.5%)	15.6%	(9.7%, 24.1%)
Salem City	51775	9.8%	(1.4%, 45.2%)	7.0%	(5.7%, 8.5%)

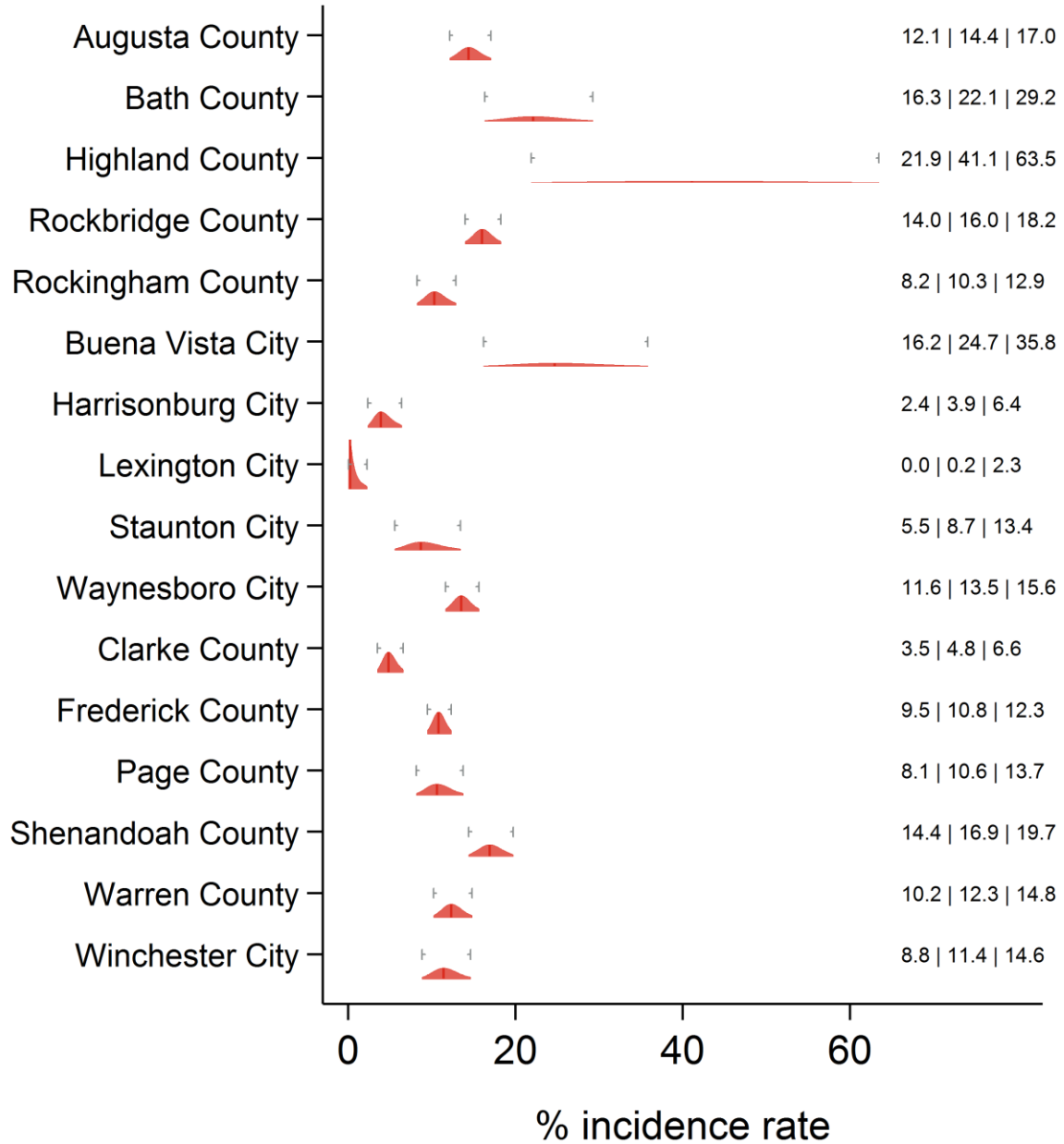
County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Bland County	51021	50.8%	(19.9%, 81.1%)	34.0%	(26.6%, 42.3%)
Buchanan County	51027	15.4%	(5.8%, 35.1%)	16.6%	(11.8%, 22.9%)
Carroll County	51035	33.0%	(16.0%, 56.1%)	19.8%	(17.5%, 22.4%)
Dickenson County	51051	14.2%	(4.4%, 37.7%)	19.1%	(15.1%, 23.8%)
Floyd County	51063	26.8%	(10.8%, 52.6%)	23.0%	(18.2%, 28.6%)
Franklin County	51067	9.3%	(2.9%, 26.2%)	13.1%	(11.0%, 15.4%)
Giles County	51071	20.0%	(7.9%, 42.4%)	16.4%	(14.3%, 18.7%)
Grayson County	51077	30.3%	(10.5%, 61.6%)	18.1%	(15.0%, 21.7%)
Henry County	51089	16.1%	(7.7%, 30.8%)	21.3%	(18.1%, 24.9%)
Lee County	51105	36.2%	(14.2%, 65.9%)	22.4%	(18.1%, 27.3%)
Montgomery County	51121	11.6%	(4.6%, 26.3%)	9.0%	(7.1%, 11.4%)
Patrick County	51141	12.3%	(3.1%, 37.6%)	20.3%	(16.9%, 24.2%)
Pittsylvania County	51143	27.0%	(17.4%, 39.2%)	20.8%	(17.8%, 24.2%)
Pulaski County	51155	14.0%	(5.2%, 32.8%)	16.3%	(13.9%, 19.2%)
Russell County	51167	9.8%	(4.4%, 25.4%)	20.1%	(17.1%, 23.4%)
Scott County	51169	38.2%	(18.9%, 62.1%)	27.5%	(21.8%, 34.0%)
Smyth County	51173	25.0%	(10.1%, 49.6%)	20.8%	(18.7%, 23.0%)
Tazewell County	51185	37.8%	(20.5%, 58.8%)	23.5%	(19.5%, 28.0%)
Washington County	51191	17.4%	(8.6%, 32.1%)	16.0%	(13.3%, 19.2%)
Wise County	51195	18.5%	(8.7%, 35.3%)	20.2%	(15.3%, 26.1%)
Wythe County	51197	18.4%	(7.2%, 39.7%)	18.7%	(16.4%, 21.2%)
Bristol City	51520	0.0%	(0.0%, 78.6%)	22.5%	(17.9%, 27.8%)
Danville City	51590	21.2%	(7.6%, 46.8%)	20.1%	(17.0%, 23.5%)
Galax City	51640	0.0%	(0.0%, 76.1%)	20.7%	(14.4%, 28.7%)
Martinsville City	51690	12.2%	(3.3%, 59.8%)	17.9%	(14.3%, 22.1%)
Norton City	51720	50.9%	(11.5%, 89.2%)	28.5%	(23.9%, 33.7%)
Radford City	51750	8.6%	(3.3%, 48.6%)	10.7%	(7.7%, 14.7%)
Roanoke City	51770	16.2%	(9.2%, 26.8%)	15.3%	(13.2%, 17.5%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Amelia County	51007	35.2%	(10.3%, 72.1%)	11.9%	(9.5%, 14.7%)
Brunswick County	51025	20.1%	(5.4%, 52.6%)	13.2%	(10.1%, 17.0%)
Buckingham County	51029	16.0%	(5.1%, 40.4%)	14.2%	(12.0%, 16.8%)
Charles City County	51036	0.0%	(0.0%, 58.8%)	9.9%	(7.2%, 13.5%)
Charlotte County	51037	19.7%	(8.7%, 38.8%)	16.1%	(14.0%, 18.4%)
Chesterfield County	51041	7.3%	(4.7%, 11.2%)	7.0%	(6.1%, 7.9%)
Cumberland County	51049	9.4%	(2.7%, 27.5%)	12.7%	(10.5%, 15.2%)
Dinwiddie County	51053	26.8%	(7.6%, 62.1%)	11.0%	(9.1%, 13.3%)
Goochland County	51075	0.0%	(0.0%, 24.3%)	5.9%	(4.4%, 7.8%)
Greensville County	51081	24.8%	(4.2%, 71.4%)	14.1%	(10.8%, 18.2%)
Halifax County	51083	18.3%	(8.2%, 35.8%)	17.6%	(15.6%, 19.9%)
Hanover County	51085	9.8%	(4.2%, 21.1%)	7.5%	(6.1%, 9.1%)
Henrico County	51087	12.4%	(7.6%, 19.6%)	10.7%	(9.6%, 11.9%)
Lunenburg County	51111	6.6%	(3.2%, 35.8%)	14.3%	(10.6%, 19.0%)
Mecklenburg County	51117	12.8%	(6.1%, 25.0%)	12.2%	(10.1%, 14.6%)
New Kent County	51127	9.8%	(2.5%, 31.9%)	7.2%	(5.4%, 9.5%)
Nottoway County	51135	11.0%	(2.9%, 33.6%)	10.6%	(8.3%, 13.5%)
Powhatan County	51145	5.8%	(3.1%, 28.3%)	7.3%	(5.5%, 9.7%)
Prince Edward County	51147	10.4%	(4.0%, 24.6%)	8.8%	(6.6%, 11.7%)
Prince George County	51149	16.7%	(7.9%, 31.9%)	22.1%	(18.7%, 25.9%)
Surry County	51181	9.5%	(1.4%, 43.6%)	14.8%	(12.6%, 17.3%)
Sussex County	51183	6.3%	(1.0%, 30.3%)	12.6%	(9.2%, 17.1%)
Colonial Heights City	51570	19.7%	(6.7%, 45.6%)	12.4%	(8.9%, 17.0%)
Emporia City	51595	0.0%	(0.0%, 91.8%)	18.2%	(12.1%, 26.5%)
Hopewell City	51670	17.0%	(6.2%, 39.0%)	17.6%	(14.7%, 20.9%)
Petersburg City	51730	27.9%	(14.5%, 46.8%)	23.8%	(18.1%, 30.7%)
Richmond City	51760	13.8%	(7.2%, 24.6%)	15.4%	(12.7%, 18.4%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Accomack County	51001	22.4%	(11.6%, 38.9%)	19.3%	(14.7%, 24.9%)
Essex County	51057	9.8%	(3.2%, 26.3%)	8.3%	(5.8%, 11.8%)
Gloucester County	51073	15.2%	(7.1%, 29.5%)	13.7%	(11.8%, 15.9%)
Isle of Wight County	51093	5.7%	(1.4%, 20.2%)	9.9%	(8.1%, 12.1%)
James City County	51095	3.8%	(1.3%, 10.9%)	3.7%	(2.4%, 5.8%)
King and Queen County	51097	15.6%	(4.4%, 51.7%)	12.2%	(9.9%, 15.0%)
King William County	51101	43.4%	(18.4%, 72.3%)	8.9%	(6.4%, 12.2%)
Lancaster County	51103	6.4%	(1.7%, 21.1%)	8.7%	(5.4%, 13.5%)
Mathews County	51115	27.7%	(10.2%, 56.5%)	17.8%	(13.1%, 23.8%)
Middlesex County	51119	5.8%	(2.6%, 28.4%)	7.5%	(5.7%, 9.7%)
Northampton County	51131	19.0%	(6.7%, 43.6%)	15.4%	(12.6%, 18.6%)
Northumberland County	51133	7.2%	(3.3%, 28.9%)	6.7%	(4.3%, 10.2%)
Richmond County	51159	24.1%	(7.0%, 57.2%)	18.3%	(14.2%, 23.3%)
Southampton County	51175	6.0%	(0.9%, 30.3%)	10.7%	(8.6%, 13.2%)
Westmoreland County	51193	46.6%	(18.4%, 77.2%)	25.8%	(15.9%, 39.0%)
York County	51199	12.4%	(5.4%, 26.0%)	9.5%	(8.1%, 11.2%)
Chesapeake City	51550	11.8%	(5.4%, 23.8%)	12.9%	(11.4%, 14.6%)
Franklin City	51620	18.2%	(5.8%, 44.9%)	9.6%	(5.8%, 15.6%)
Hampton City	51650	19.5%	(13.4%, 27.5%)	17.4%	(15.1%, 19.9%)
Newport News City	51700	15.0%	(9.1%, 23.8%)	16.1%	(14.4%, 18.1%)
Norfolk City	51710	12.7%	(8.2%, 19.2%)	12.0%	(10.1%, 14.2%)
Poquoson City	51735	7.0%	(1.4%, 75.3%)	5.6%	(3.7%, 8.4%)
Portsmouth City	51740	16.4%	(8.9%, 28.1%)	18.7%	(16.2%, 21.5%)
Suffolk City	51800	14.7%	(6.8%, 28.9%)	13.5%	(12.3%, 14.9%)
Virginia Beach City	51810	7.5%	(5.0%, 11.0%)	8.5%	(6.8%, 10.5%)
Williamsburg City	51830	0.0%	(0.0%, 68.1%)	2.9%	(1.6%, 5.3%)

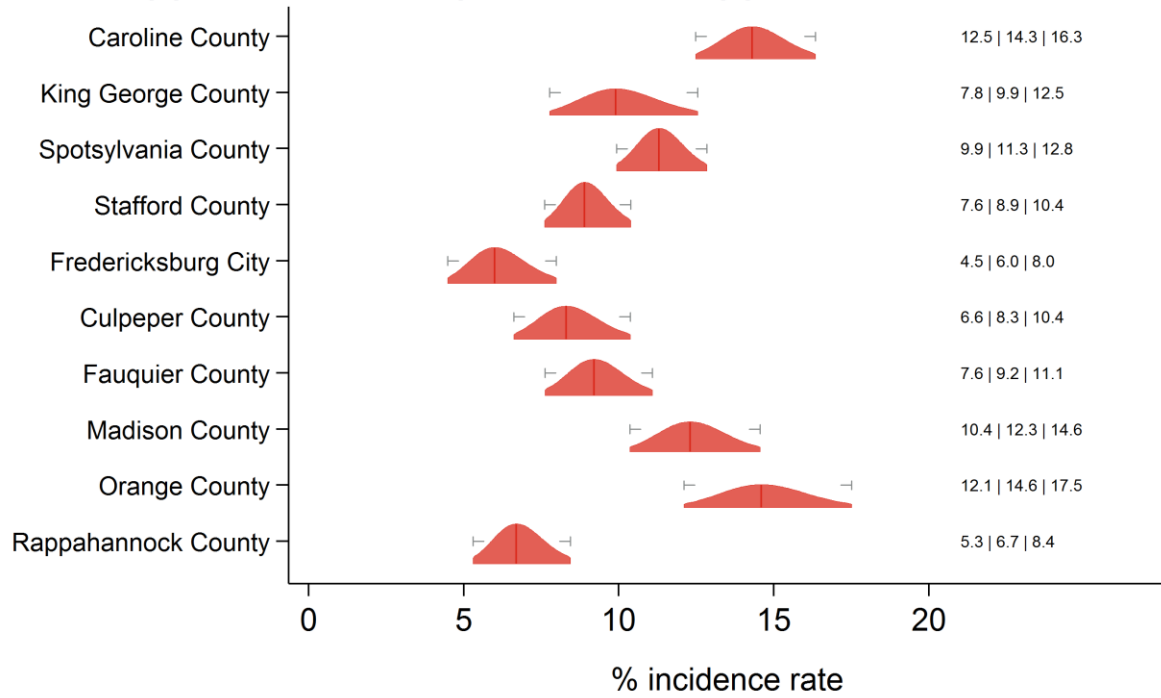
Graphical representation

Current smoker Central Shenandoah and Lord Fairfax HDs



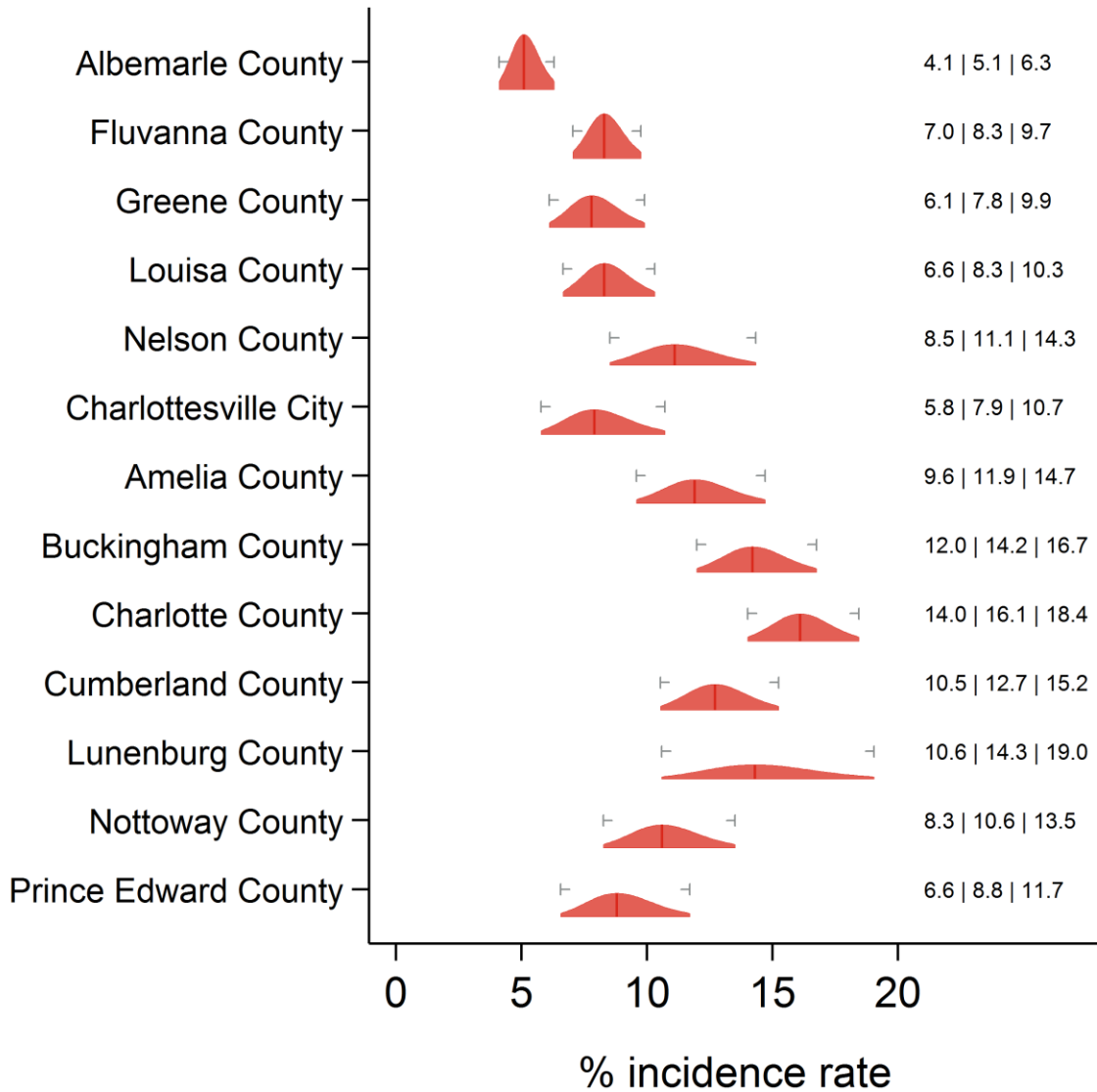
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Current smoker Rappahannock/Rapidan and Rappahannock HDs



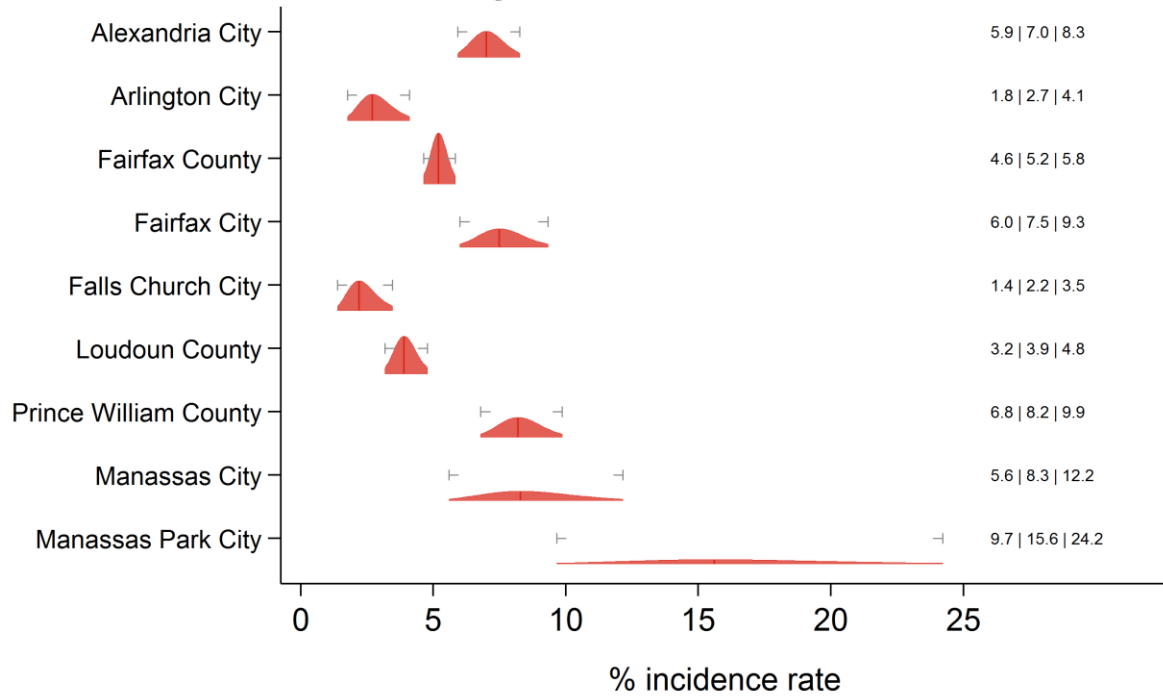
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Current smoker Thomas Jefferson and Piedmont HDs



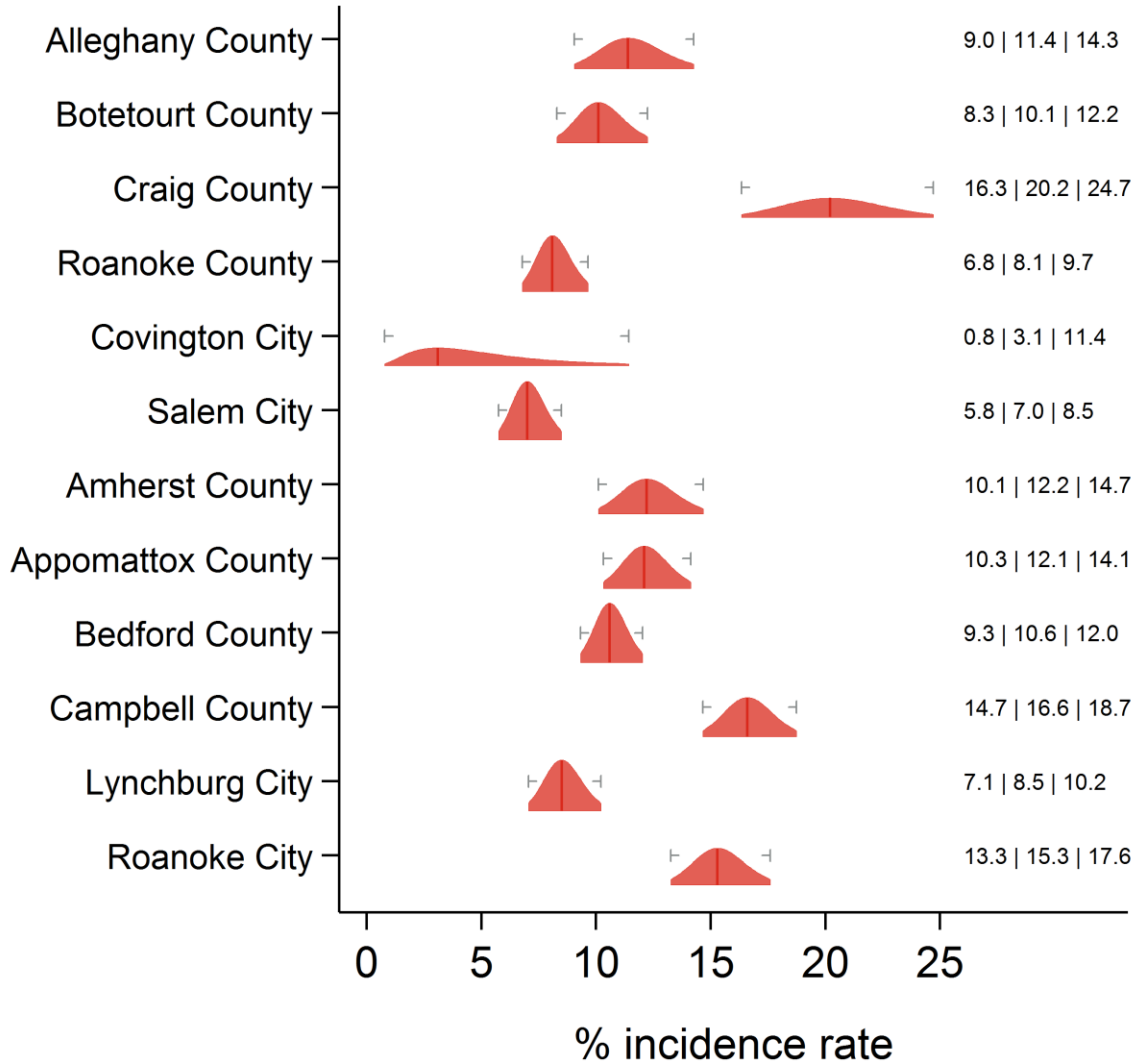
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Current smoker Alexandria, Fairfax, Arlington, Loudon, Prince William HDs



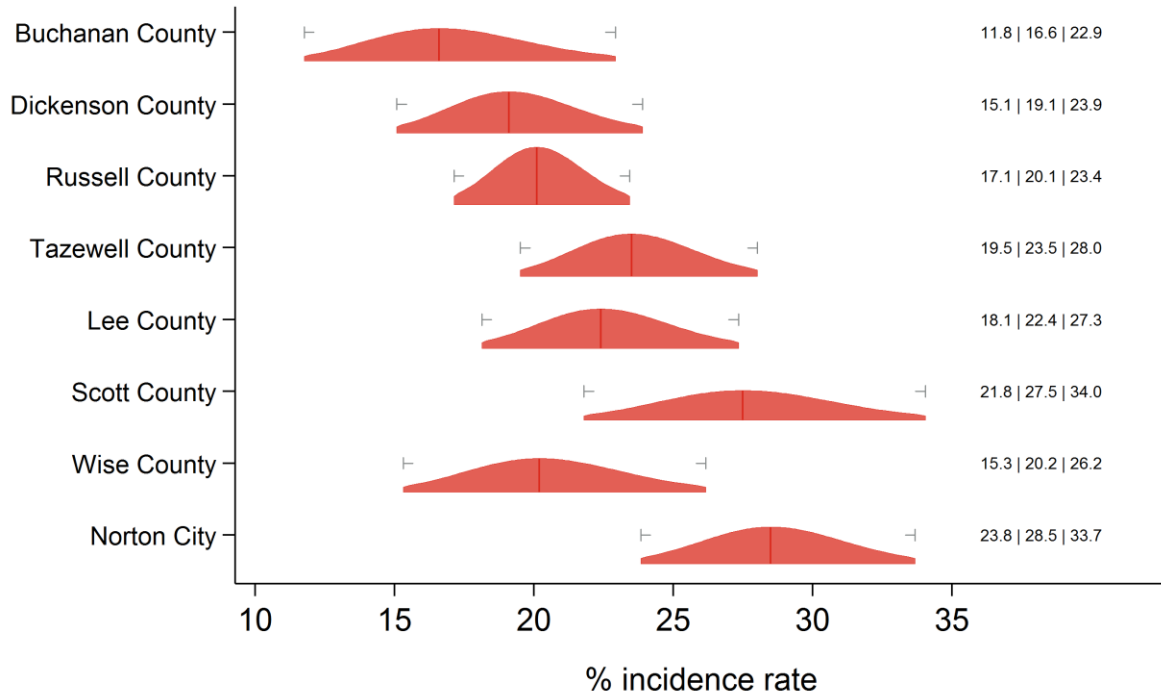
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Current smoker Alleghany, Roanoke and Central Virginia HDs



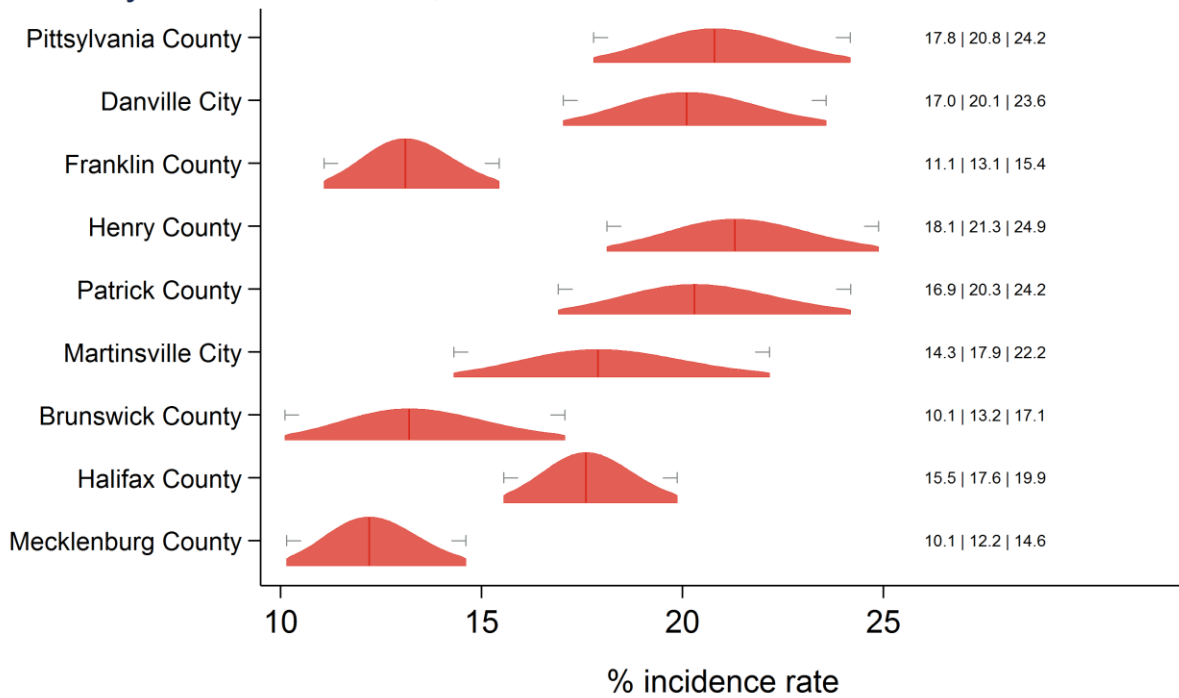
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Current smoker Cumberland Plateau and Lenowisco HDs



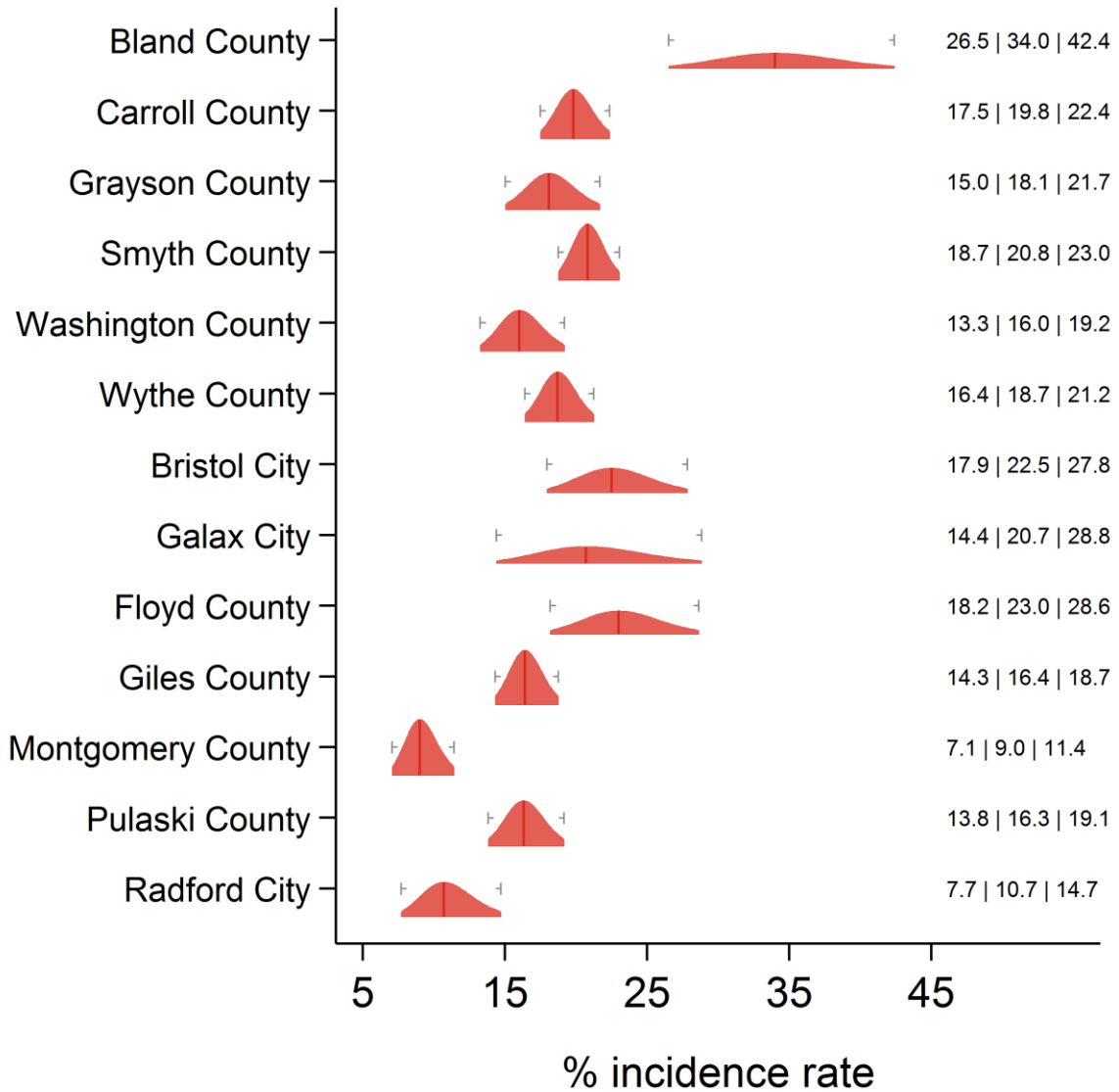
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Current smoker Pittsylvania/Danville, Southside and West Piedmont HDs



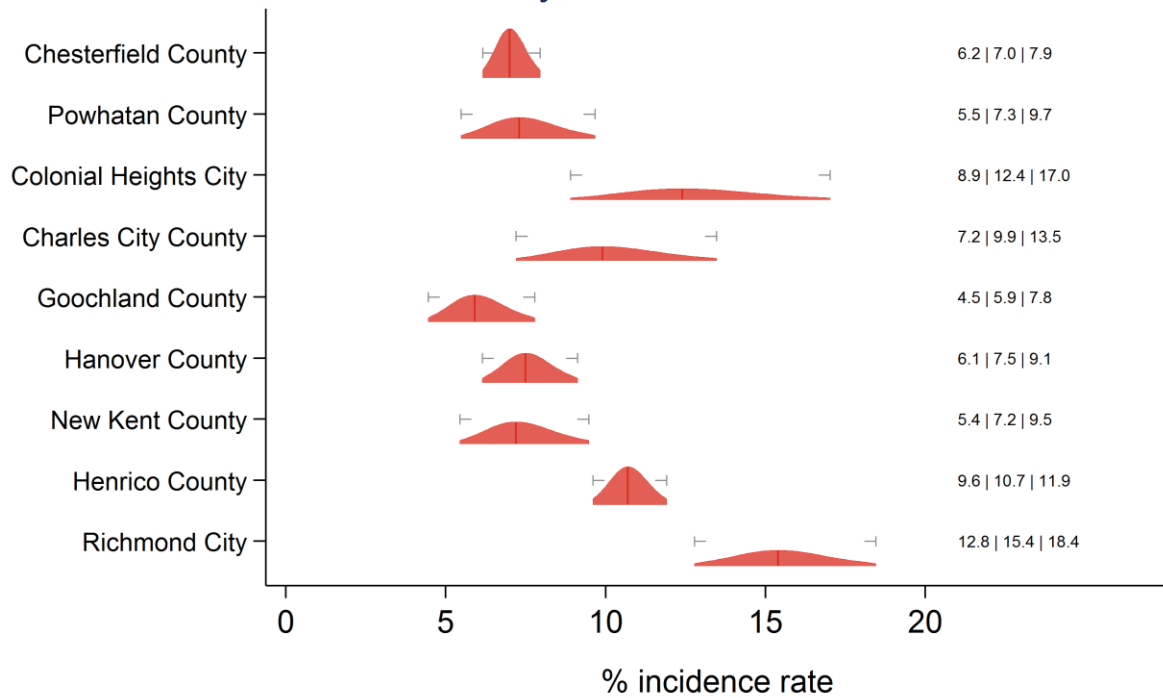
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Current smoker New River and Mount Rogers HDs



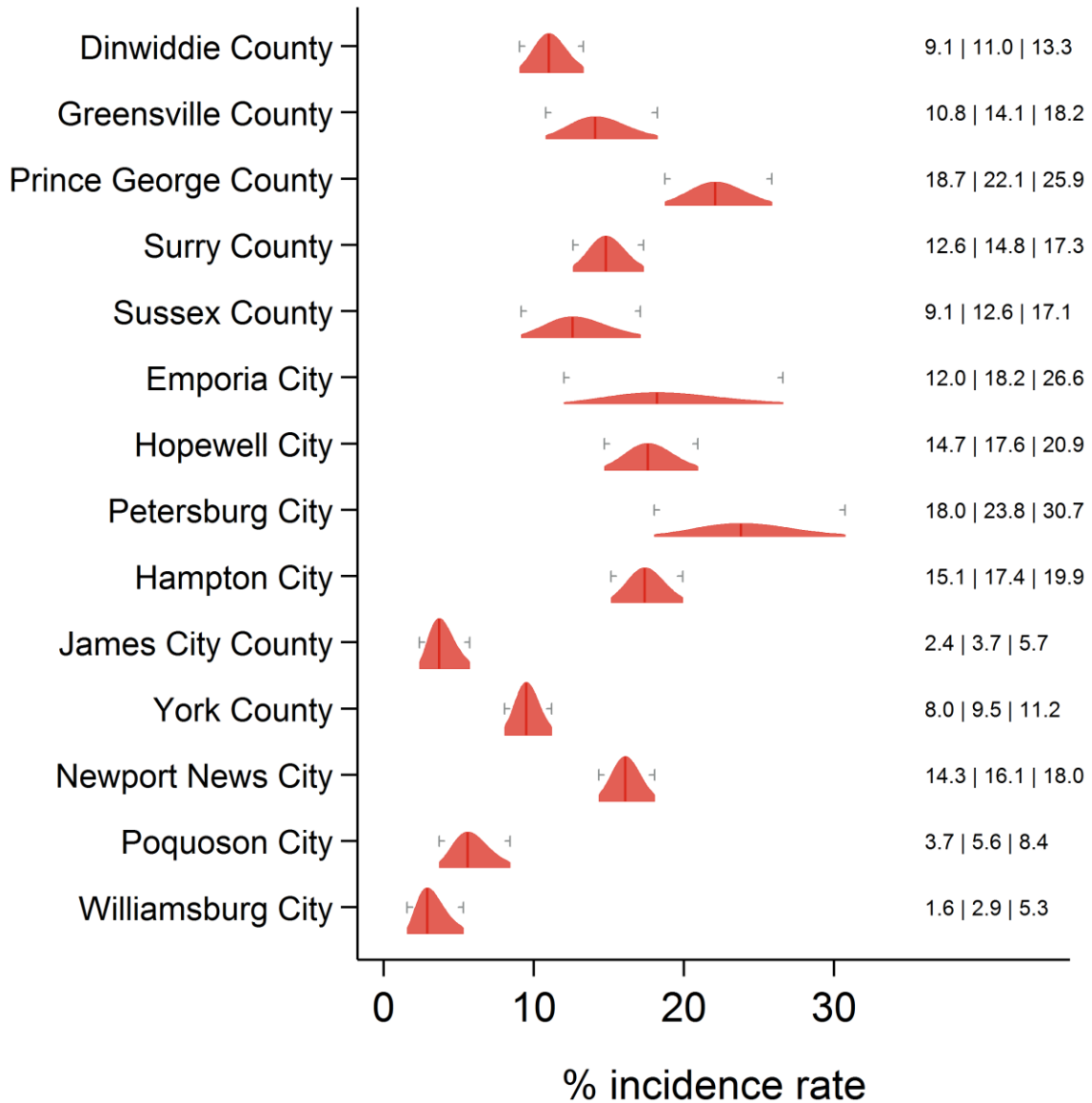
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Current smoker Chesterfield, Chickahominy, Henrico and Richmond HDs



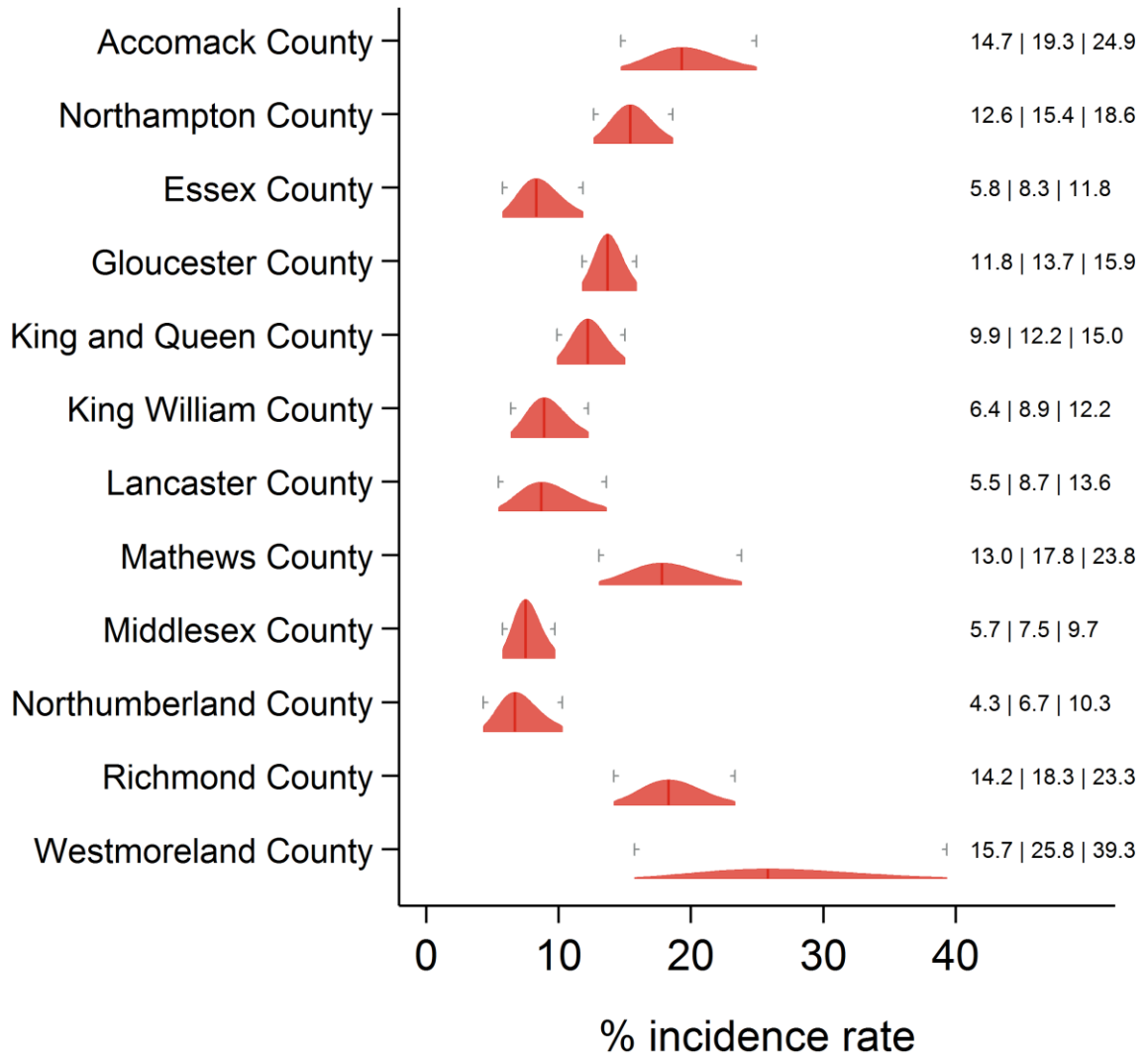
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Current smoker Crater, Peninsula and Hampton HDs



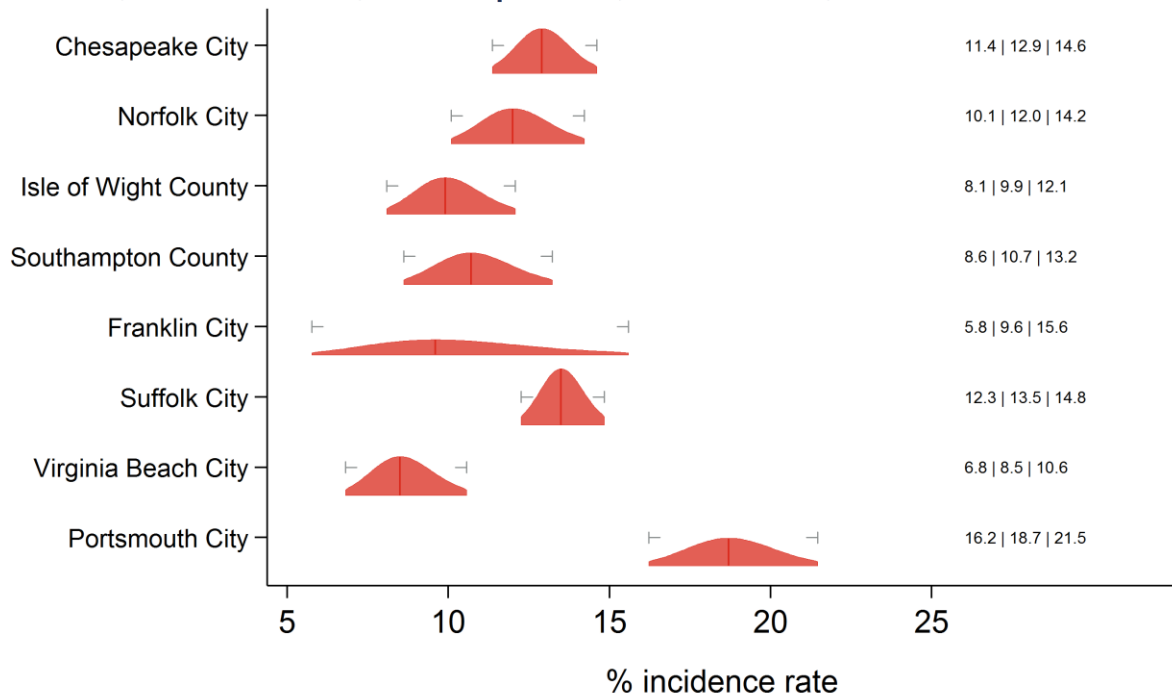
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Current smoker Eastern Shore and Three Rivers HDs



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

Current smoker 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: 50 areas.

Direct estimate is outside the 95% SAE Wilson CI: 83 areas.

SAE estimate is inside the 95% direct Wilson CI: 130 areas.

SAE estimate is outside the 95% direct Wilson CI: 3 areas.

SAE Wilson 95% CI is fully inside the 95% direct Wilson CI: 122 areas.

SAE Wilson 95% CI partially overlaps with the 95% direct Wilson CI: 11 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: 118 areas.

SAE standard error is greater than the (nonzero) direct standard error: 1 areas.

Direct standard error is zero: 14 areas.

Proportion of SAE variance due to ACS sampling error: min = 0.01%; med = 2.66%; max = 14.56%.

Proportion of SAE variance due to sampling error in regression coefficient estimates: min = 19.66%; med = 91.13%; max = 99.16%.

Proportion of SAE variance due to model selection: min = 0.40%; med = 4.89%; max = 80.32%.

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