

Outcome 11: Ever had asthma

Internal variable name: outc11_asthma

Definition: (Ever told) you had asthma?

Predictive models

	Mixed, demos only	Logit, no area effects	Mixed with area covariates
	b/se	b/se	b/se
Outcome 11: Ever had asthma			
NH White	0.0000 (.)	0.0000 (.)	0.0000 (.)
NH Black vs. NH White	-0.0097 (0.1200)	0.0087 (0.1109)	-0.0097 (0.1200)
NH Asian vs. NH White	-0.8694** (0.3174)	-0.8807** (0.2893)	-0.8694** (0.3174)
NH Other vs. NH White	0.1114 (0.1549)	0.1202 (0.1662)	0.1114 (0.1549)
Hispanic vs. NH White	-0.3678 (0.2165)	-0.3746 (0.2010)	-0.3678 (0.2165)
SEX OF RESPONDENT=1			
Female	0.5224*** (0.0929)	0.5232*** (0.0883)	0.5224*** (0.0929)
Age 18-34 vs. 65+	0.3665* (0.1451)	0.3733** (0.1208)	0.3665* (0.1451)
Age 35-44 vs. 65+	0.1923 (0.1628)	0.1951 (0.1361)	0.1923 (0.1628)
Age 45-54 vs. 65+	0.2268* (0.1115)	0.2287 (0.1228)	0.2268* (0.1115)
Age 55-64 vs. 65+	0.2208* (0.0978)	0.2203 (0.1171)	0.2208* (0.0978)
65+	0.0000 (.)	0.0000 (.)	0.0000 (.)
_cons	-2.3131*** (0.0978)	-2.2951*** (0.0939)	-2.3131*** (0.0978)
Area effect variance			
var(_cons[FIPS_county])	0.0399 (0.0283)		0.0399 (0.0283)

Number of alternative models used to estimate model error = 2.

Results by health districts

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Augusta County	51015	19.4%	(11.6%, 30.7%)	15.6%	(13.2%, 18.4%)
Bath County	51017	13.5%	(1.9%, 55.4%)	13.3%	(10.5%, 16.7%)
Caroline County	51033	14.8%	(5.1%, 35.9%)	13.4%	(11.6%, 15.4%)
Clarke County	51043	3.7%	(1.4%, 28.6%)	12.0%	(9.9%, 14.5%)
Culpeper County	51047	4.9%	(1.2%, 18.0%)	11.5%	(9.7%, 13.6%)
Fauquier County	51061	18.5%	(9.3%, 33.4%)	14.4%	(12.6%, 16.4%)
Frederick County	51069	12.8%	(6.3%, 24.3%)	12.8%	(11.2%, 14.5%)
Highland County	51091	3.8%	(1.5%, 51.4%)	12.8%	(8.9%, 18.0%)
King George County	51099	11.3%	(5.5%, 30.5%)	12.5%	(10.6%, 14.7%)
Madison County	51113	11.2%	(4.1%, 35.6%)	12.8%	(10.0%, 16.2%)
Orange County	51137	18.8%	(6.0%, 46.0%)	14.0%	(12.2%, 16.0%)
Page County	51139	6.8%	(2.4%, 28.0%)	12.2%	(10.3%, 14.4%)
Rappahannock County	51157	24.2%	(5.2%, 64.8%)	13.8%	(12.1%, 15.6%)
Rockbridge County	51163	10.8%	(3.8%, 26.7%)	12.7%	(10.9%, 14.7%)
Rockingham County	51165	9.1%	(4.9%, 16.4%)	11.9%	(10.3%, 13.8%)
Shenandoah County	51171	11.2%	(5.2%, 22.4%)	12.5%	(10.0%, 15.6%)
Spotsylvania County	51177	7.0%	(4.2%, 13.8%)	10.3%	(9.1%, 11.6%)
Stafford County	51179	10.8%	(5.6%, 20.0%)	12.1%	(10.7%, 13.6%)
Warren County	51187	21.5%	(10.7%, 38.4%)	14.8%	(13.0%, 16.7%)
Buena Vista City	51530	0.0%	(0.0%, 62.9%)	12.8%	(9.2%, 17.5%)
Fredericksburg City	51630	12.2%	(4.1%, 30.9%)	12.8%	(11.1%, 14.7%)
Harrisonburg City	51660	9.8%	(4.0%, 38.0%)	13.0%	(11.4%, 14.8%)
Lexington City	51678	0.0%	(0.0%, 99.4%)	13.1%	(9.4%, 18.2%)
Staunton City	51790	0.0%	(0.0%, 35.7%)	12.3%	(10.2%, 14.7%)
Waynesboro	51820	11.6%	(2.6%, 73.5%)	13.1%	(11.0%, 15.6%)

City					
Winchester City	51840	0.0%	(0.0%, 33.9%)	12.1%	(10.5%, 13.9%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Albemarle County	51003	11.5%	(6.8%, 18.9%)	12.3%	(10.9%, 13.9%)
Alleghany County	51005	2.2%	(1.3%, 16.4%)	11.1%	(7.8%, 15.6%)
Amherst County	51009	4.4%	(2.3%, 16.2%)	11.1%	(9.4%, 13.1%)
Appomattox County	51011	12.4%	(4.5%, 29.8%)	12.9%	(10.4%, 15.8%)
Arlington City	51013	12.4%	(7.5%, 19.7%)	12.2%	(10.9%, 13.7%)
Bedford County	51019	14.3%	(8.1%, 24.0%)	13.4%	(11.7%, 15.2%)
Botetourt County	51023	22.8%	(10.0%, 43.9%)	14.9%	(12.8%, 17.2%)
Campbell County	51031	22.8%	(13.6%, 35.8%)	16.9%	(14.8%, 19.4%)
Craig County	51045	0.0%	(-0.0%, 50.9%)	12.5%	(10.5%, 14.9%)
Fairfax County	51059	11.2%	(8.8%, 14.2%)	10.9%	(9.6%, 12.3%)
Fluvanna County	51065	2.8%	(1.2%, 23.8%)	11.8%	(10.3%, 13.4%)
Greene County	51079	9.2%	(3.4%, 45.6%)	12.9%	(10.7%, 15.5%)
Loudoun County	51107	14.1%	(10.0%, 19.6%)	12.7%	(11.2%, 14.3%)
Louisa County	51109	12.9%	(4.6%, 31.4%)	13.0%	(11.2%, 15.1%)
Nelson County	51125	21.2%	(5.3%, 56.3%)	13.6%	(11.9%, 15.4%)
Prince William County	51153	15.1%	(11.0%, 20.5%)	13.6%	(12.0%, 15.4%)
Roanoke County	51161	7.0%	(4.1%, 11.8%)	10.2%	(8.0%, 12.9%)
Alexandria City	51510	12.6%	(7.0%, 21.7%)	12.6%	(11.2%, 14.2%)
Charlottesville City	51540	9.6%	(2.6%, 29.6%)	12.4%	(9.8%, 15.5%)
Covington City	51580	0.0%	(0.0%, 81.2%)	12.9%	(8.8%, 18.5%)
Fairfax City	51600	8.3%	(4.2%, 20.2%)	10.9%	(9.0%, 13.1%)
Falls Church City	51610	12.1%	(2.3%, 44.1%)	11.6%	(10.1%, 13.4%)
Lynchburg City	51680	20.2%	(10.3%, 35.6%)	15.6%	(13.5%, 18.0%)
Manassas City	51683	6.2%	(2.3%, 27.2%)	11.1%	(9.5%, 13.1%)
Manassas Park City	51685	0.0%	(0.0%, 57.9%)	11.3%	(8.9%, 14.2%)
Salem City	51775	10.9%	(1.5%, 49.5%)	13.1%	(11.6%, 14.8%)

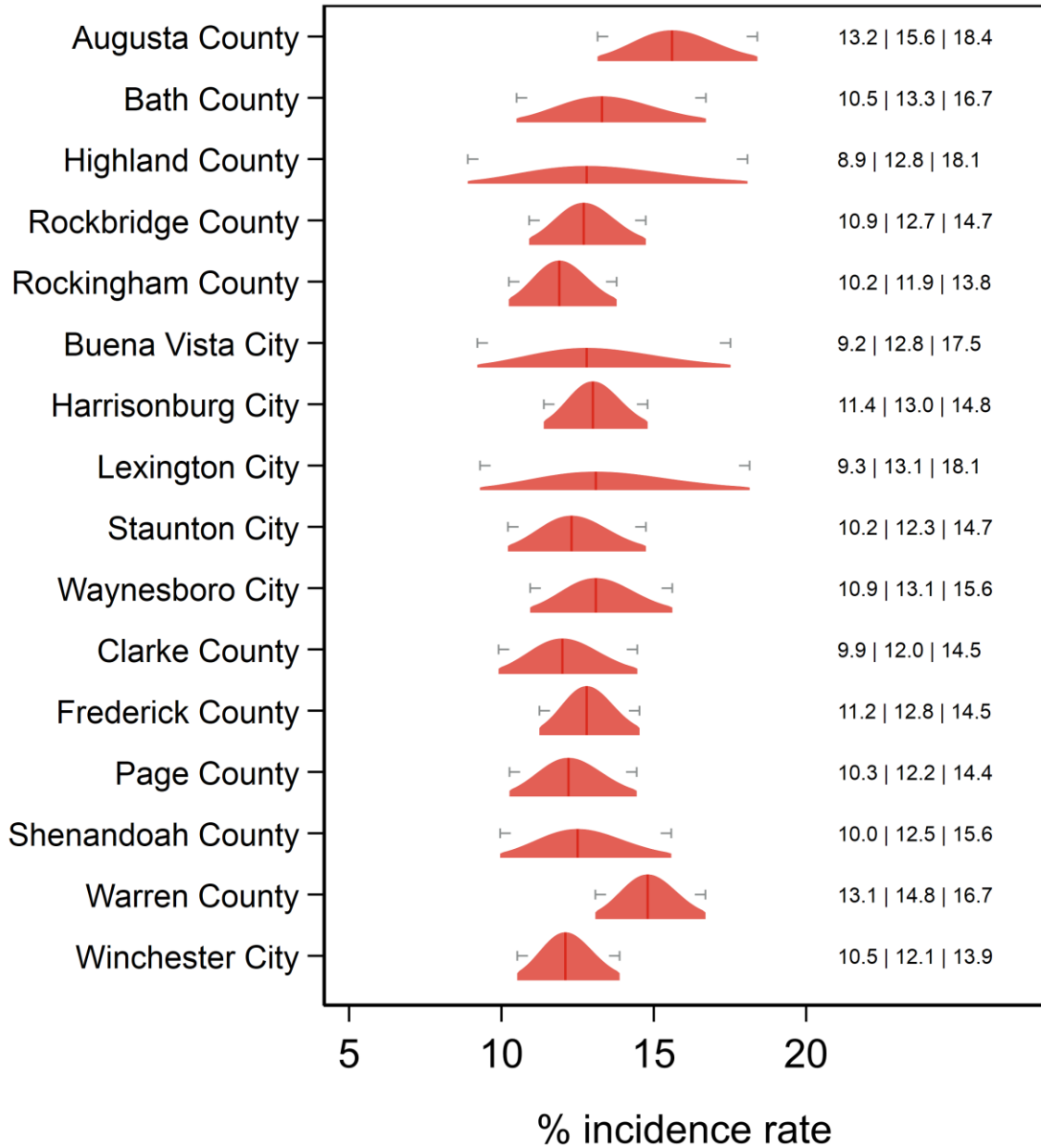
County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Bland County	51021	4.2%	(1.3%, 60.7%)	12.8%	(9.3%, 17.4%)
Buchanan County	51027	1.2%	(0.7%, 19.8%)	11.5%	(7.7%, 17.0%)
Carroll County	51035	19.7%	(5.3%, 51.6%)	14.0%	(11.6%, 16.9%)
Dickenson County	51051	12.6%	(4.6%, 36.0%)	13.0%	(11.4%, 14.9%)
Floyd County	51063	1.8%	(1.0%, 23.5%)	12.0%	(10.2%, 14.0%)
Franklin County	51067	8.9%	(5.1%, 19.9%)	11.9%	(10.3%, 13.6%)
Giles County	51071	2.8%	(1.2%, 45.3%)	12.7%	(10.1%, 15.9%)
Grayson County	51077	19.1%	(4.7%, 53.1%)	13.9%	(12.1%, 15.9%)
Henry County	51089	21.0%	(12.1%, 34.0%)	15.7%	(13.7%, 17.9%)
Lee County	51105	2.2%	(1.5%, 20.8%)	11.7%	(8.1%, 16.5%)
Montgomery County	51121	8.9%	(4.5%, 16.9%)	11.6%	(10.1%, 13.3%)
Patrick County	51141	17.2%	(5.5%, 42.6%)	13.9%	(11.8%, 16.2%)
Pittsylvania County	51143	12.7%	(7.0%, 21.7%)	12.6%	(10.7%, 14.8%)
Pulaski County	51155	30.2%	(14.5%, 52.6%)	17.0%	(15.1%, 19.1%)
Russell County	51167	26.8%	(12.8%, 47.8%)	15.5%	(13.6%, 17.7%)
Scott County	51169	9.5%	(3.6%, 23.0%)	12.0%	(8.7%, 16.2%)
Smyth County	51173	12.3%	(5.0%, 27.4%)	13.0%	(9.8%, 17.0%)
Tazewell County	51185	16.7%	(9.2%, 28.2%)	14.0%	(11.4%, 16.9%)
Washington County	51191	14.4%	(6.6%, 28.6%)	13.4%	(11.5%, 15.5%)
Wise County	51195	5.1%	(2.9%, 13.4%)	10.5%	(8.9%, 12.4%)
Wythe County	51197	2.4%	(1.2%, 15.1%)	11.0%	(9.1%, 13.2%)
Bristol City	51520	29.2%	(3.5%, 82.3%)	13.9%	(10.8%, 17.8%)
Danville City	51590	4.6%	(2.3%, 28.6%)	12.2%	(10.2%, 14.6%)
Galax City	51640	0.0%	(-0.0%, 92.2%)	13.0%	(9.6%, 17.6%)
Martinsville City	51690	0.0%	(0.0%, 41.2%)	12.4%	(8.7%, 17.2%)
Norton City	51720	9.8%	(0.5%, 94.7%)	13.2%	(9.3%, 18.5%)
Radford City	51750	1.9%	(1.0%, 23.0%)	11.9%	(10.1%, 14.1%)
Roanoke City	51770	17.8%	(9.5%, 30.8%)	14.6%	(12.3%, 17.2%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Amelia County	51007	0.0%	(0.0%, 31.3%)	12.1%	(10.6%, 13.8%)
Brunswick County	51025	16.9%	(5.4%, 41.7%)	13.6%	(11.1%, 16.6%)
Buckingham County	51029	27.4%	(11.1%, 53.4%)	14.8%	(11.6%, 18.6%)
Charles City County	51036	31.7%	(4.2%, 83.2%)	13.8%	(11.8%, 16.0%)
Charlotte County	51037	8.2%	(3.8%, 31.2%)	12.5%	(10.9%, 14.4%)
Chesterfield County	51041	19.1%	(13.2%, 26.9%)	16.3%	(14.8%, 18.0%)
Cumberland County	51049	1.2%	(0.7%, 31.5%)	12.2%	(10.2%, 14.6%)
Dinwiddie County	51053	19.1%	(8.2%, 38.7%)	14.3%	(12.5%, 16.2%)
Goochland County	51075	20.7%	(3.4%, 66.3%)	13.8%	(11.9%, 16.0%)
Greensville County	51081	5.2%	(2.5%, 33.7%)	12.4%	(10.2%, 15.0%)
Halifax County	51083	14.2%	(6.4%, 28.8%)	13.3%	(11.7%, 15.0%)
Hanover County	51085	5.4%	(2.2%, 12.6%)	10.8%	(9.5%, 12.3%)
Henrico County	51087	10.8%	(6.9%, 16.3%)	11.4%	(10.1%, 12.8%)
Lunenburg County	51111	6.8%	(3.4%, 34.3%)	12.7%	(10.9%, 14.8%)
Mecklenburg County	51117	18.8%	(10.4%, 31.5%)	14.6%	(12.9%, 16.5%)
New Kent County	51127	8.7%	(4.2%, 29.0%)	12.5%	(9.7%, 16.0%)
Nottoway County	51135	4.9%	(0.8%, 24.8%)	12.0%	(10.1%, 14.1%)
Powhatan County	51145	33.3%	(12.6%, 63.2%)	15.4%	(13.1%, 18.1%)
Prince Edward County	51147	17.0%	(6.3%, 38.2%)	14.0%	(12.2%, 16.0%)
Prince George County	51149	6.2%	(3.8%, 21.5%)	12.0%	(10.4%, 13.7%)
Surry County	51181	22.0%	(3.9%, 66.1%)	13.7%	(11.4%, 16.4%)
Sussex County	51183	10.6%	(2.8%, 33.1%)	13.1%	(10.8%, 15.7%)
Colonial Heights City	51570	18.0%	(6.2%, 41.9%)	13.7%	(12.0%, 15.6%)
Emporia City	51595	0.0%	(0.0%, 74.9%)	12.9%	(10.5%, 15.9%)
Hopewell City	51670	13.1%	(3.3%, 40.0%)	13.1%	(11.2%, 15.3%)
Petersburg	51730	40.3%	(18.2%, 67.2%)	17.1%	(13.5%, 21.3%)

City					
Richmond City	51760	14.1%	(9.0%, 21.3%)	13.6%	(11.6%, 15.8%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Accomack County	51001	10.7%	(5.6%, 19.2%)	12.1%	(10.5%, 13.9%)
Essex County	51057	7.8%	(3.7%, 30.9%)	12.3%	(9.9%, 15.2%)
Gloucester County	51073	30.8%	(16.8%, 49.6%)	17.4%	(15.1%, 20.0%)
Isle of Wight County	51093	30.4%	(15.0%, 52.0%)	16.6%	(14.5%, 19.0%)
James City County	51095	17.8%	(10.6%, 28.5%)	14.6%	(12.7%, 16.7%)
King and Queen County	51097	44.6%	(11.8%, 83.0%)	14.8%	(13.0%, 16.7%)
King William County	51101	10.3%	(4.9%, 44.3%)	13.0%	(11.4%, 14.7%)
Lancaster County	51103	8.4%	(2.6%, 23.5%)	12.4%	(10.3%, 14.9%)
Mathews County	51115	5.0%	(2.2%, 22.7%)	11.7%	(8.6%, 15.6%)
Middlesex County	51119	19.9%	(6.1%, 48.8%)	13.6%	(11.7%, 15.7%)
Northampton County	51131	10.0%	(3.2%, 27.2%)	12.5%	(9.4%, 16.5%)
Northumberland County	51133	30.2%	(12.9%, 55.7%)	15.5%	(13.2%, 18.1%)
Richmond County	51159	12.6%	(5.8%, 25.4%)	12.7%	(11.1%, 14.5%)
Southampton County	51175	28.1%	(12.4%, 52.0%)	15.4%	(13.7%, 17.2%)
Westmoreland County	51193	22.1%	(9.5%, 43.6%)	14.4%	(12.8%, 16.2%)
York County	51199	9.9%	(4.1%, 22.3%)	12.0%	(10.4%, 13.8%)
Chesapeake City	51550	10.9%	(7.2%, 16.3%)	11.7%	(10.4%, 13.1%)
Franklin City	51620	7.6%	(2.1%, 48.7%)	12.9%	(11.3%, 14.6%)
Hampton City	51650	10.3%	(6.1%, 16.9%)	11.7%	(10.2%, 13.4%)
Newport News City	51700	13.9%	(8.5%, 21.9%)	13.2%	(11.6%, 15.0%)
Norfolk City	51710	20.4%	(14.6%, 27.6%)	17.0%	(15.1%, 19.1%)
Poquoson City	51735	5.2%	(1.8%, 44.8%)	12.5%	(10.6%, 14.8%)
Portsmouth City	51740	22.0%	(13.8%, 33.2%)	16.9%	(14.3%, 19.8%)
Suffolk City	51800	7.3%	(3.4%, 14.9%)	11.3%	(9.7%, 13.2%)
Virginia Beach City	51810	17.4%	(12.3%, 24.0%)	15.5%	(13.9%, 17.2%)
Williamsburg City	51830	33.7%	(10.5%, 68.9%)	14.6%	(9.5%, 21.9%)

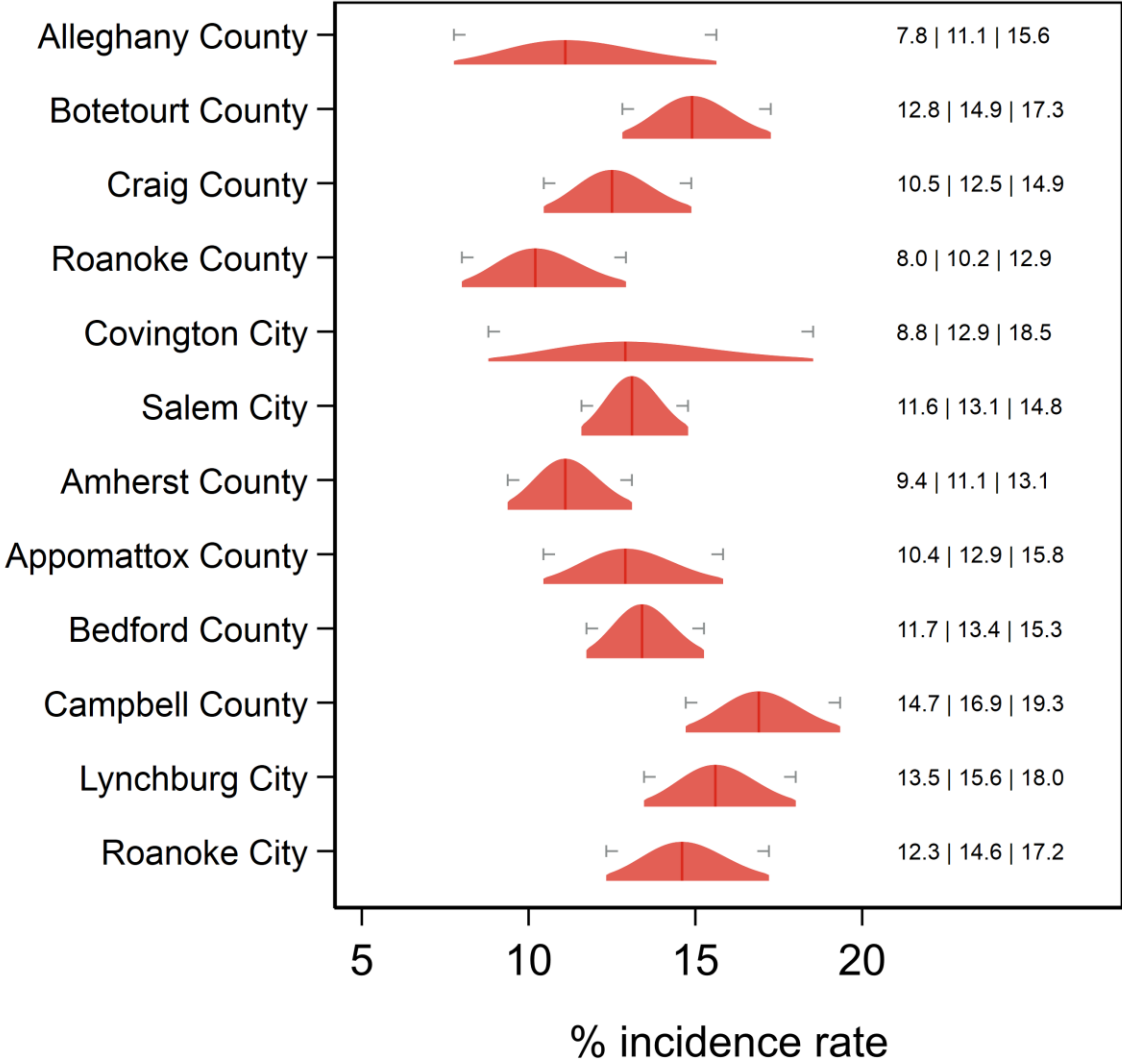
Ever had asthma Central Shenandoah and Lord Fairfax HDs



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

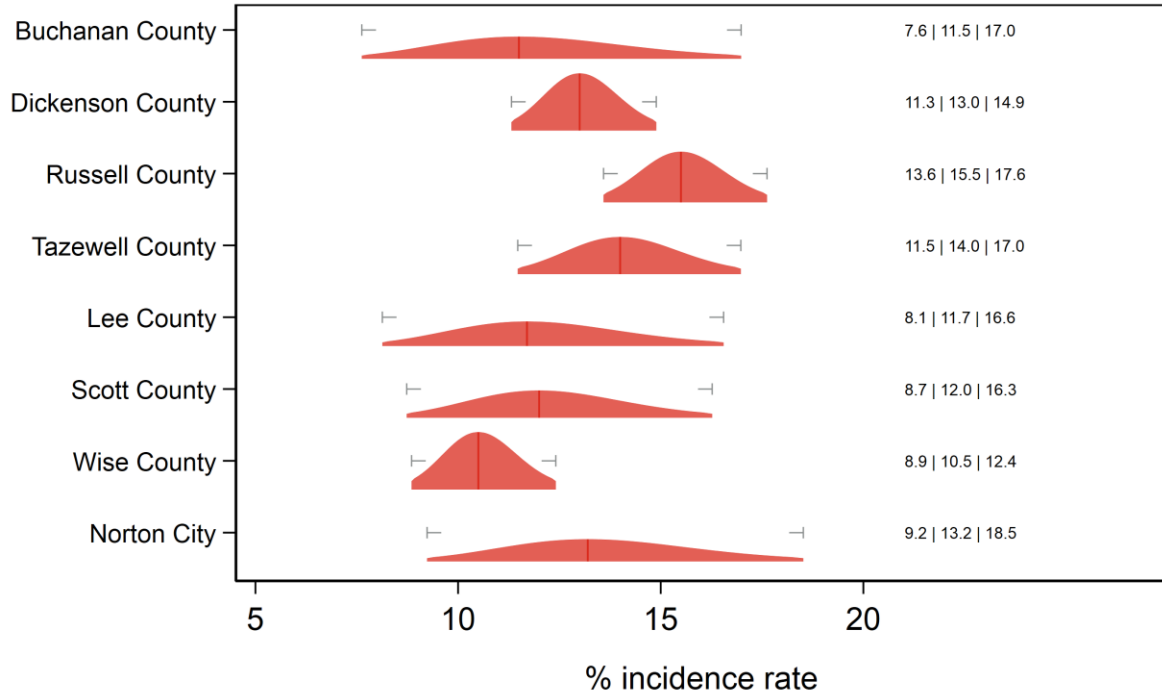
Ever had asthma

Alleghany, Roanoke and Central Virginia HDs



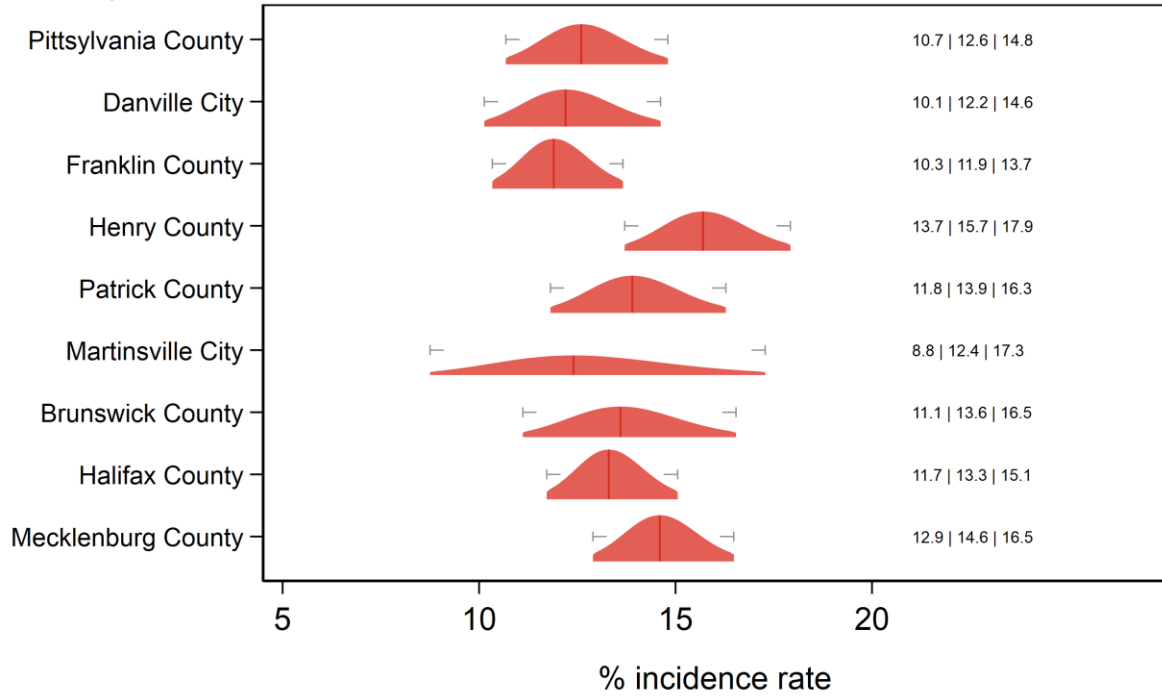
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Ever had asthma Cumberland Plateau and Lenowisco HDs



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

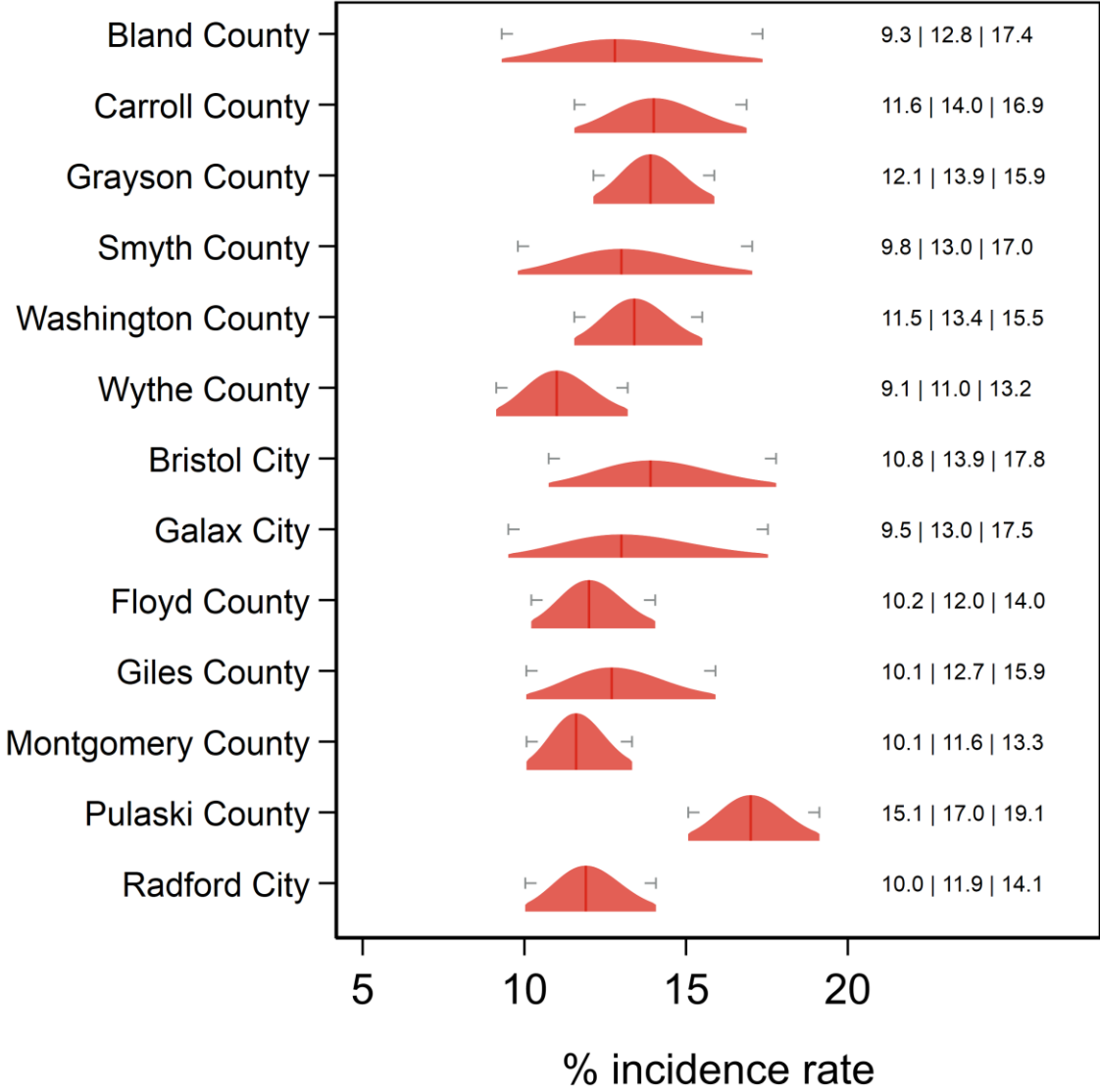
Ever had asthma Pittsylvania/Danville, Southside and West Piedmont HDs



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

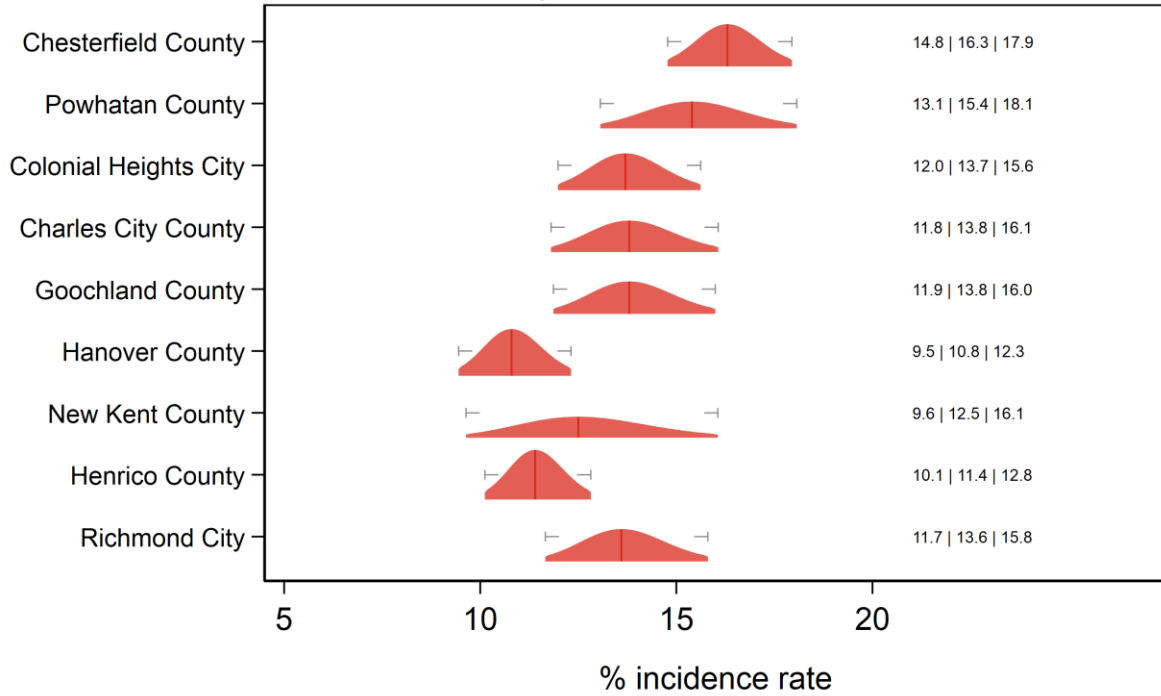
Ever had asthma

New River and Mount Rogers HDs



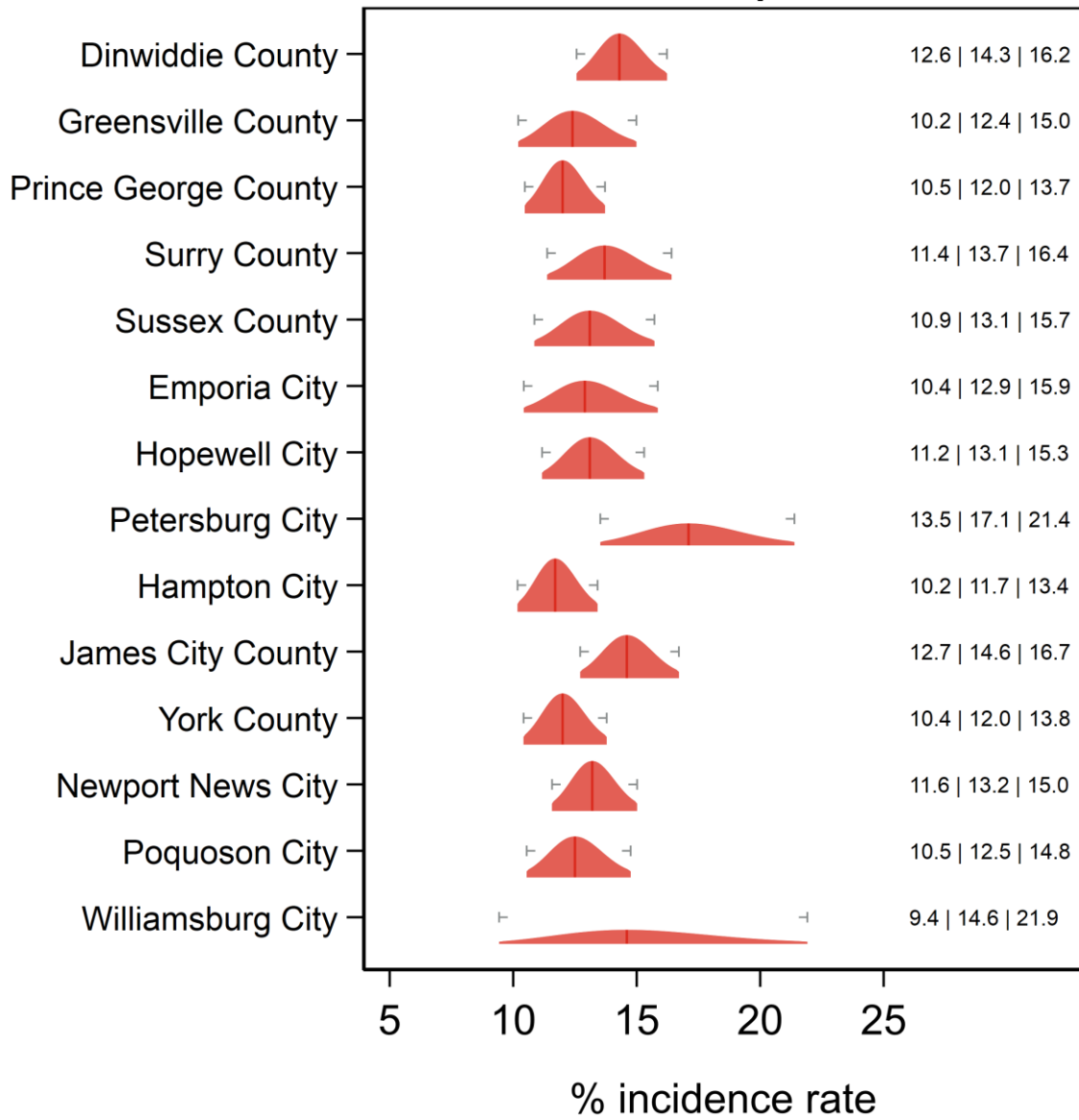
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Ever had asthma Chesterfield, Chickahominy, Henrico and Richmond HDs



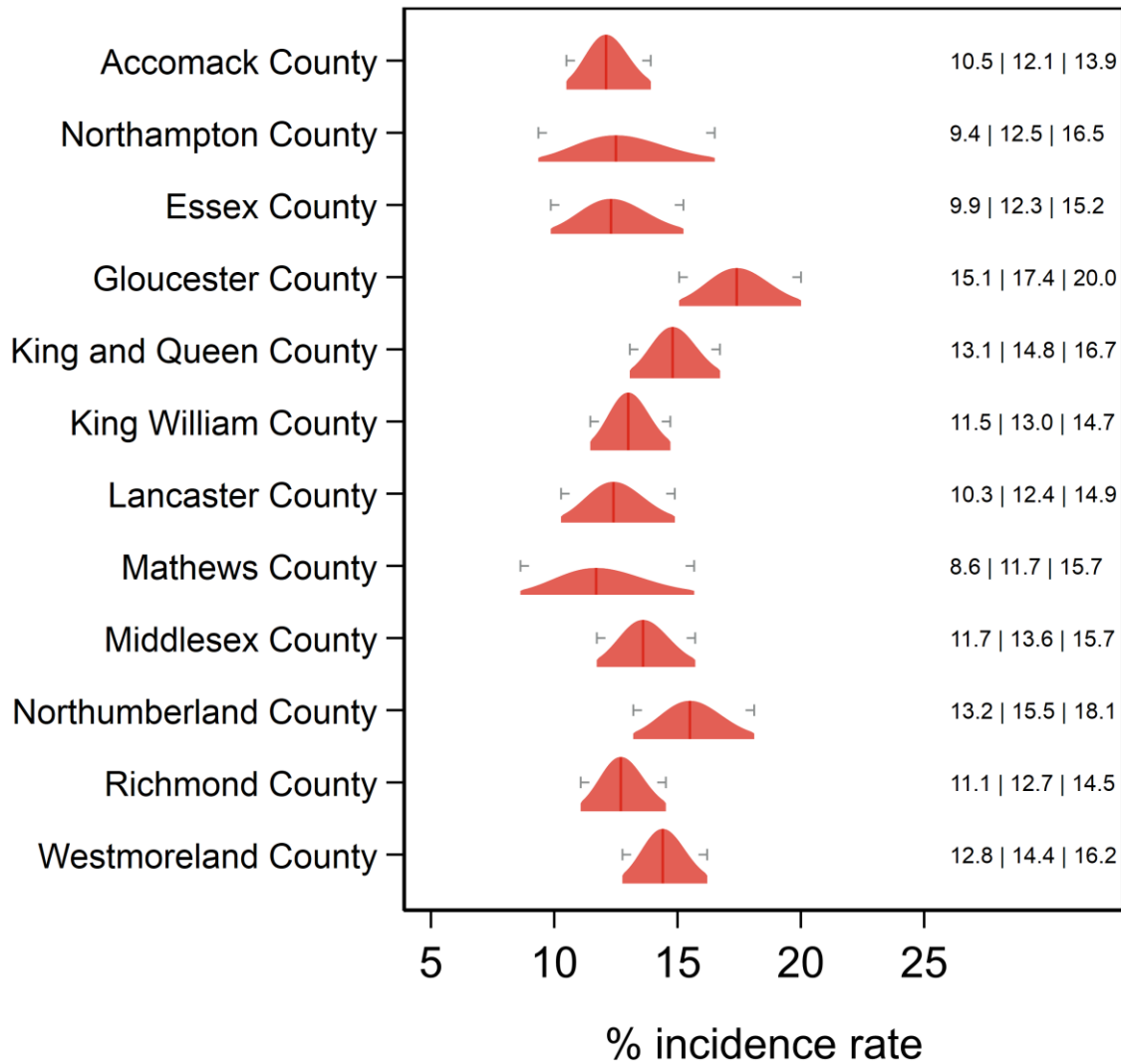
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Ever had asthma Crater, Peninsula and Hampton HDs



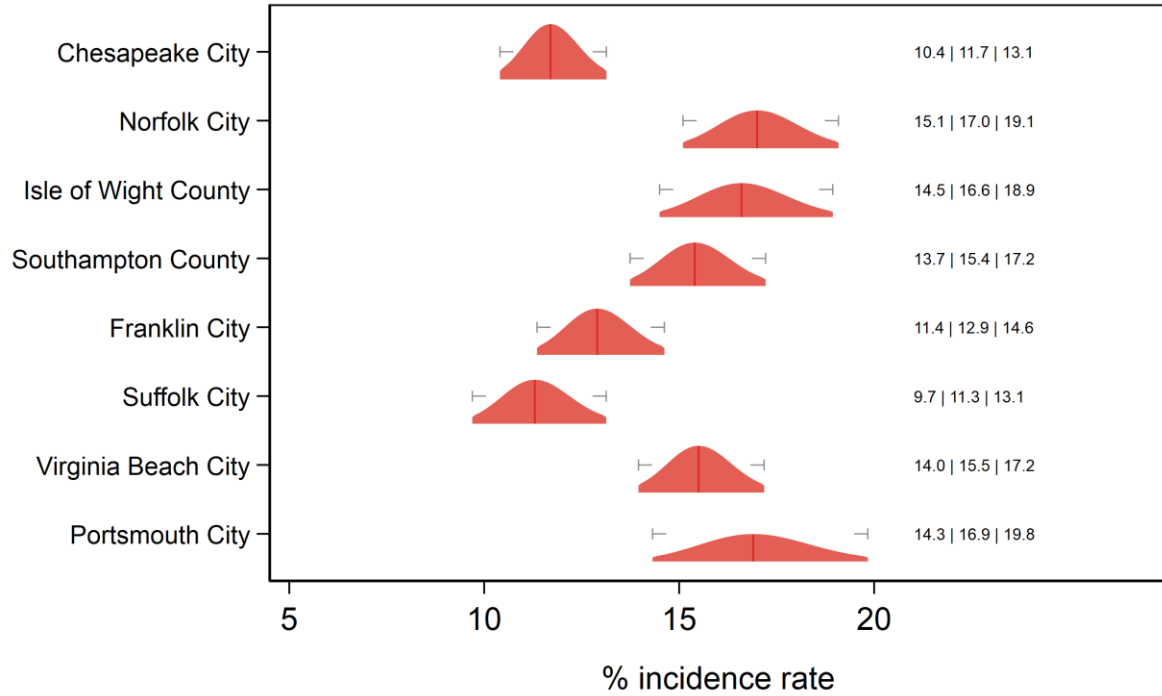
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Ever had asthma Eastern Shore and Three Rivers HDs



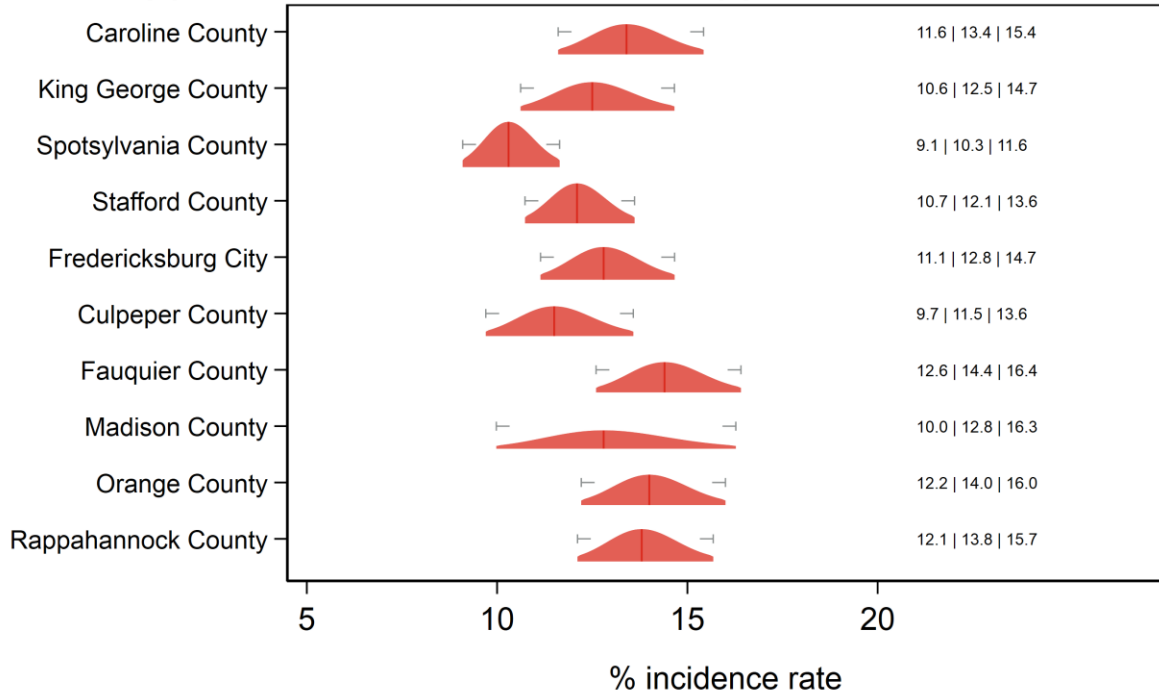
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Ever had asthma 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

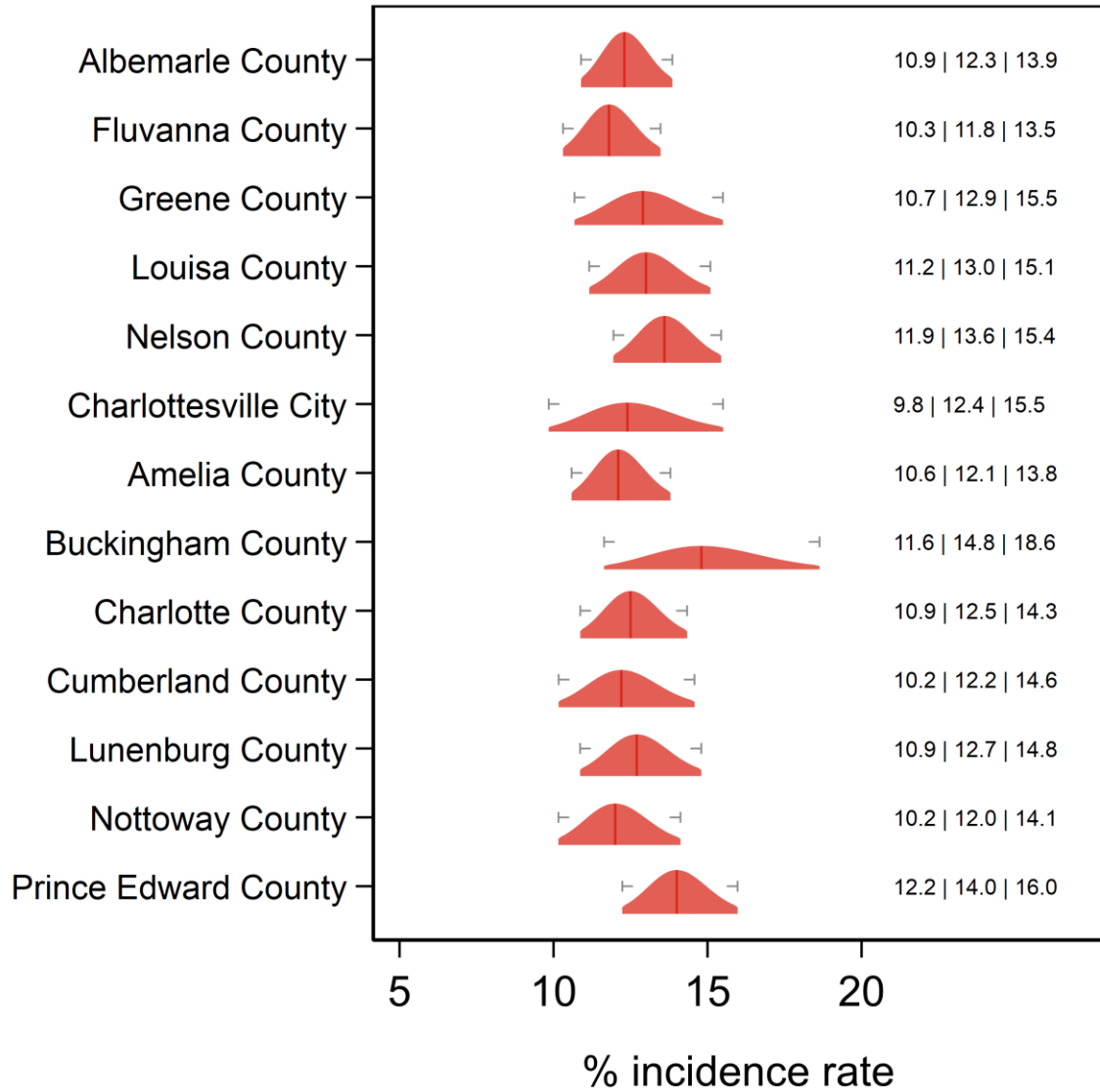
Ever had asthma Rappahannock/Rapidan and Rappahannock HDs



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

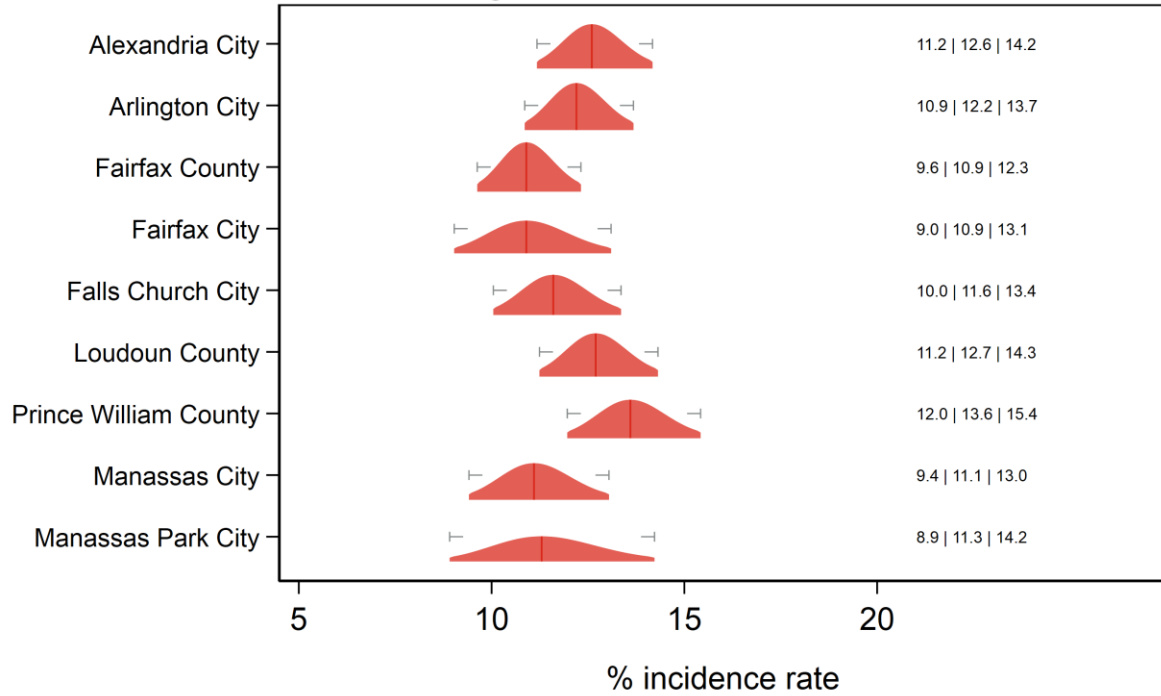
Ever had asthma

Thomas Jefferson and Piedmont HDs



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

Ever had asthma 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

Additional diagnostics

Direct estimate is inside the 95% SAE Wilson CI: 36 areas.

Direct estimate is outside the 95% SAE Wilson CI: 97 areas.

SAE estimate is inside the 95% direct Wilson CI: 132 areas.

SAE estimate is outside the 95% direct Wilson CI: 1 areas.

SAE Wilson 95% CI is fully inside the 95% direct Wilson CI: 128 areas.

SAE Wilson 95% CI partially overlaps with the 95% direct Wilson CI: 5 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: 119 areas.

SAE standard error is greater than the (nonzero) direct standard error: 3 areas.

Direct standard error is zero: 11 areas.

Proportion of SAE variance due to ACS sampling error: min = 0.51%; med = 4.10%; max = 10.32%.

Proportion of SAE variance due to sampling error in regression coefficient estimates: min = 3.47%; med = 34.06%; max = 85.78%.

Proportion of SAE variance due to model selection: min = 0.27%; med = 35.07%; max = 92.80%.

Proportion of SAE variance due to area random effects: min = 3.22%; med = 22.89%; max = 50.06%.