Indicator 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 Black vs. NH White	0.0098 (0.1383)	-0.0773 (0.1146)	-0.0773 (0.1378)
NH Asian vs. NH White	-0.8833** (0.3033)	-0.8302* (0.3334)	-0.8302** (0.3154)
NH Other vs. NH White	0.0252 (0.1354)	0.0297 (0.1880)	0.0297 (0.1371)
Hispanic vs. NH White	-0.2681 (0.1590)	-0.2333 (0.2087)	-0.2333 (0.1596)
Female	0.6506*** (0.1007)	0.6518*** (0.0909)	0.6518*** (0.1010)
Age 18-34 vs. 65+	0.5955*** (0.1139)	0.5801*** (0.1147)	0.5801*** (0.1124)
Age 35-44 vs. 65+	0.3047* (0.1326)	0.3011* (0.1363)	0.3011* (0.1319)
Age 45-54 vs. 65+	0.3131** (0.1151)	0.3267** (0.1220)	0.3267** (0.1178)
Age 55-64 vs. 65+	0.3502*** (0.1016)	0.3533** (0.1156)	0.3533*** (0.1017)
Non-stratified water domain index		-0.1639* (0.0679)	-0.1639*** (0.0449)
% HHs with chidren receiving SSI, cash transfers, SNAP		0.0269*** (0.0054)	0.0269*** (0.0038)
Town on 4-cat urban/rural scale		0.5168** (0.1630)	0.5168*** (0.1407)
Non-stratified land domain index		0.2757* (0.1082)	0.2757*** (0.0716)
% urbanized area pop, 2010 Census		0.0040** (0.0014)	0.0040** (0.0012)
VA BRFSS 2014 SAE outc37_psa_test		42.0313* (18.0135)	42.0313* (16.5121)
c.VA14SAE_outc37_psa_test#c.VA14SAE_outc37_psa_test		-33.2365* (15.0289)	-33.2365* (13.5400)
% HHs with children: non family		-0.1030	-0.1030

		(0.0683)	(0.0542)
Myeloma Female Rate		-0.0200	-0.0200
		(0.0140)	(0.0118)
c.ACS_pct_kids_nonfamily#c.MyelomaFemaleRate		-0.0139	-0.0139
		(0.0158)	(0.0111)
Intercept	-2.4782***	-16.4942**	-16.4942**
	(0.1025)	(5.4058)	(5.0230)
Area effect variance			
	0.0419		0.0000
	(0.0245)		(0.0000)

Number of alternative models used to estimate model error = 7.

Results

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Augusta County	51015	9.5%	(4.3%, 19.6%)	13.1%	(11.2%, 15.2%)
Bath County	51017	0.0%	(0.0%, 37.3%)	7.8%	(4.4%, 13.4%)
Caroline County	51033	5.9%	(1.9%, 33.7%)	7.9%	(6.3%, 9.8%)
Clarke County	51043	7.7%	(3.0%, 33.8%)	9.4%	(5.1%, 16.7%)
Culpeper County	51047	8.9%	(4.9%, 22.0%)	13.9%	(11.0%, 17.4%)
Fauquier County	51061	20.2%	(10.4%, 35.7%)	12.1%	(10.7%, 13.7%)
Frederick County	51069	6.5%	(2.5%, 16.1%)	9.3%	(8.0%, 10.7%)
Highland County	51091	15.8%	(2.1%, 62.3%)	6.2%	(3.3%, 11.4%)
King George County	51099	5.0%	(2.3%, 40.3%)	6.8%	(5.2%, 8.8%)
Madison County	51113	6.7%	(2.2%, 31.1%)	14.8%	(12.2%, 17.8%)
Orange County	51137	20.6%	(8.4%, 42.3%)	11.3%	(8.6%, 14.7%)
Page County	51139	10.2%	(4.8%, 31.4%)	7.8%	(5.6%, 10.7%)
Rappahannock County	51157	15.6%	(5.5%, 45.8%)	16.9%	(14.0%, 20.3%)
Rockbridge County	51163	27.4%	(13.2%, 48.5%)	22.1%	(18.3%, 26.4%)
Rockingham County	51165	15.0%	(7.7%, 27.2%)	12.3%	(10.5%, 14.2%)
Shenandoah County	51171	5.9%	(2.8%, 19.1%)	15.1%	(12.3%, 18.5%)
Spotsylvania County	51177	14.4%	(7.9%, 24.8%)	11.9%	(10.6%, 13.3%)
Stafford County	51179	5.9%	(2.4%, 13.9%)	11.4%	(10.3%, 12.5%)
Warren County	51187	24.4%	(11.7%, 44.1%)	18.1%	(15.0%, 21.8%)
Buena Vista City	51530	22.1%	(4.6%, 62.4%)	17.2%	(13.7%, 21.3%)
Fredericksburg City	51630	19.2%	(6.2%, 46.1%)	19.1%	(16.3%, 22.4%)
Harrisonburg City	51660	8.0%	(2.6%, 50.8%)	16.4%	(14.3%, 18.7%)
Lexington City	51678	0.0%	(0.0%, 96.3%)	4.9%	(2.2%, 10.9%)
Staunton City	51790	8.4%	(2.1%, 50.9%)	7.2%	(4.3%, 11.9%)
Waynesboro City	51820	24.3%	(6.4%, 60.1%)	17.6%	(14.0%, 22.0%)
Winchester City	51840	1.4%	(0.5%, 61.0%)	9.3%	(5.3%, 15.8%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Albemarle County	51003	11.5%	(6.6%, 19.5%)	13.8%	(12.4%, 15.5%)
Alleghany County	51005	13.1%	(4.9%, 30.7%)	14.3%	(11.7%, 17.4%)
Amherst County	51009	9.9%	(3.1%, 27.8%)	20.0%	(17.2%, 23.2%)
Appomattox County	51011	20.6%	(8.3%, 42.5%)	15.6%	(12.9%, 18.7%)
Arlington City	51013	13.8%	(7.5%, 23.9%)	12.1%	(10.5%, 13.9%)
Bedford County	51019	7.9%	(4.3%, 14.0%)	10.1%	(8.5%, 11.8%)
Botetourt County	51023	0.0%	(0.0%, 15.6%)	6.9%	(5.2%, 9.0%)
Campbell County	51031	7.7%	(3.2%, 17.6%)	12.0%	(10.2%, 14.0%)
Craig County	51045	17.4%	(3.5%, 75.8%)	13.1%	(10.1%, 16.8%)
Fairfax County	51059	12.5%	(10.1%, 15.4%)	10.9%	(9.9%, 12.0%)
Fluvanna County	51065	9.5%	(2.7%, 27.9%)	12.2%	(10.3%, 14.5%)
Greene County	51079	33.6%	(12.1%, 65.2%)	23.0%	(19.1%, 27.4%)
Loudoun County	51107	12.6%	(8.2%, 18.8%)	9.4%	(8.0%, 11.0%)
Louisa County	51109	11.8%	(4.7%, 26.5%)	7.9%	(6.1%, 10.1%)
Nelson County	51125	8.9%	(2.2%, 30.0%)	11.2%	(8.0%, 15.4%)
Prince William County	51153	11.3%	(7.6%, 16.4%)	11.9%	(10.7%, 13.3%)
Roanoke County	51161	17.1%	(10.5%, 26.7%)	12.3%	(11.0%, 13.6%)
Alexandria City	51510	19.4%	(12.2%, 29.2%)	14.0%	(12.1%, 16.1%)
Charlottesville City	51540	20.7%	(5.7%, 53.2%)	17.0%	(14.0%, 20.4%)
Covington City	51580	0.0%	(0.0%, 87.4%)	8.9%	(2.0%, 32.3%)
Fairfax City	51600	5.9%	(2.1%, 15.7%)	7.8%	(5.8%, 10.6%)
Falls Church City	51610	24.7%	(7.9%, 55.7%)	9.9%	(7.3%, 13.3%)
Lynchburg City	51680	14.3%	(8.1%, 24.1%)	15.1%	(12.3%, 18.6%)
Manassas City	51683	5.9%	(2.6%, 38.4%)	17.9%	(15.3%, 20.8%)
Manassas Park City	51685	15.5%	(1.6%, 66.7%)	4.7%	(2.3%, 9.4%)
Salem City	51775	25.8%	(7.5%, 59.7%)	18.0%	(16.1%, 20.1%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Bland County	51021	11.2%	(2.5%, 38.8%)	17.7%	(14.3%, 21.6%)
Buchanan County	51027	19.8%	(8.5%, 39.6%)	15.9%	(13.0%, 19.2%)
Carroll County	51035	6.3%	(1.7%, 20.8%)	8.6%	(6.9%, 10.7%)
Dickenson County	51051	15.2%	(5.6%, 35.0%)	12.8%	(10.3%, 15.9%)
Floyd County	51063	11.9%	(4.1%, 30.0%)	12.6%	(10.0%, 15.8%)
Franklin County	51067	14.5%	(6.4%, 29.8%)	13.4%	(10.5%, 17.0%)
Giles County	51071	1.8%	(0.8%, 14.6%)	13.2%	(10.3%, 16.7%)
Grayson County	51077	13.8%	(5.1%, 32.5%)	15.5%	(10.7%, 21.9%)
Henry County	51089	14.8%	(6.9%, 28.9%)	18.1%	(15.0%, 21.6%)
Lee County	51105	16.4%	(5.3%, 41.0%)	20.3%	(16.5%, 24.8%)
Montgomery County	51121	18.3%	(8.6%, 34.8%)	17.0%	(15.0%, 19.1%)
Patrick County	51141	13.2%	(3.2%, 41.3%)	17.7%	(14.8%, 20.9%)
Pittsylvania County	51143	14.4%	(8.2%, 24.0%)	12.4%	(9.8%, 15.5%)
Pulaski County	51155	16.9%	(7.5%, 33.7%)	11.5%	(9.3%, 14.0%)
Russell County	51167	18.5%	(8.1%, 37.1%)	11.4%	(8.9%, 14.3%)
Scott County	51169	15.8%	(6.2%, 34.9%)	16.8%	(13.5%, 20.8%)
Smyth County	51173	7.2%	(4.0%, 35.7%)	12.2%	(9.7%, 15.2%)
Tazewell County	51185	28.0%	(14.5%, 47.2%)	27.4%	(23.0%, 32.4%)
Washington County	51191	24.3%	(14.2%, 38.4%)	12.6%	(10.3%, 15.3%)
Wise County	51195	19.7%	(9.8%, 35.5%)	17.5%	(13.7%, 22.0%)
Wythe County	51197	8.1%	(2.5%, 23.2%)	7.6%	(5.9%, 9.7%)
Bristol City	51520	22.0%	(2.3%, 76.7%)	20.2%	(14.7%, 27.1%)
Danville City	51590	27.6%	(11.7%, 52.3%)	15.1%	(10.5%, 21.2%)
Galax City	51640	40.0%	(3.7%, 92.1%)	23.4%	(18.6%, 29.1%)
Martinsville City	51690	0.0%	(0.0%, 51.3%)	7.3%	(2.4%, 20.6%)
Norton City	51720	28.3%	(3.2%, 82.5%)	9.3%	(3.3%, 23.5%)
Radford City	51750	43.7%	(12.6%, 80.6%)	9.0%	(5.3%, 14.9%)
Roanoke City	51770	19.6%	(11.2%, 32.0%)	17.1%	(14.6%, 19.9%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Amelia County	51007	7.1%	(4.0%, 36.1%)	8.2%	(6.0%, 11.0%)
Brunswick County	51025	4.0%	(2.1%, 25.5%)	7.2%	(5.4%, 9.6%)
Buckingham County	51029	18.7%	(8.3%, 36.7%)	15.5%	(11.6%, 20.2%)
Charles City County	51036	0.0%	(0.0%, 51.5%)	5.9%	(3.5%, 9.8%)
Charlotte County	51037	6.3%	(2.9%, 22.1%)	11.6%	(7.6%, 17.3%)
Chesterfield County	51041	13.2%	(8.8%, 19.2%)	12.7%	(11.4%, 14.1%)
Cumberland County	51049	11.7%	(3.9%, 29.9%)	8.8%	(6.2%, 12.3%)
Dinwiddie County	51053	7.9%	(2.5%, 22.4%)	12.6%	(10.1%, 15.4%)
Goochland County	51075	4.0%	(2.3%, 27.3%)	5.4%	(4.0%, 7.3%)
Greensville County	51081	0.0%	(0.0%, 37.1%)	15.2%	(12.0%, 19.1%)
Halifax County	51083	22.8%	(11.7%, 39.6%)	19.5%	(15.9%, 23.7%)
Hanover County	51085	6.7%	(3.4%, 12.9%)	6.4%	(5.1%, 8.2%)
Henrico County	51087	9.3%	(5.4%, 15.4%)	9.8%	(8.5%, 11.3%)
Lunenburg County	51111	20.7%	(3.0%, 68.5%)	12.6%	(9.9%, 15.9%)
Mecklenburg County	51117	7.7%	(4.3%, 17.5%)	10.0%	(8.2%, 12.1%)
New Kent County	51127	13.9%	(2.6%, 49.7%)	5.6%	(3.0%, 10.1%)
Nottoway County	51135	8.1%	(4.3%, 38.3%)	17.3%	(14.0%, 21.2%)
Powhatan County	51145	10.3%	(1.6%, 44.9%)	5.6%	(3.3%, 9.3%)
Prince Edward County	51147	29.9%	(15.4%, 50.0%)	27.7%	(23.0%, 32.9%)
Prince George County	51149	11.2%	(5.5%, 21.4%)	10.1%	(8.1%, 12.5%)
Surry County	51181	25.2%	(7.2%, 59.3%)	14.5%	(11.2%, 18.4%)
Sussex County	51183	5.3%	(2.8%, 21.3%)	8.8%	(6.5%, 11.8%)
Colonial Heights City	51570	23.2%	(9.7%, 46.0%)	16.6%	(13.3%, 20.6%)
Emporia City	51595	0.0%	(0.0%, 91.8%)	2.4%	(0.5%, 9.8%)
Hopewell City	51670	21.7%	(7.0%, 50.4%)	18.4%	(15.2%, 21.9%)
Petersburg City	51730	25.4%	(12.1%, 45.7%)	22.8%	(19.8%, 26.1%)
Richmond City	51760	19.1%	(11.8%, 29.3%)	19.2%	(16.5%, 22.3%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Accomack County	51001	22.1%	(11.3%, 38.8%)	14.1%	(11.2%, 17.7%)
Essex County	51057	20.9%	(7.6%, 46.1%)	12.9%	(9.5%, 17.3%)
Gloucester County	51073	8.2%	(3.6%, 17.4%)	10.1%	(8.2%, 12.3%)
Isle of Wight County	51093	3.3%	(1.7%, 19.4%)	10.6%	(8.0%, 14.0%)
James City County	51095	10.6%	(5.7%, 18.9%)	11.5%	(9.7%, 13.5%)
King and Queen County	51097	24.6%	(6.2%, 61.9%)	15.7%	(11.9%, 20.6%)
King William County	51101	12.3%	(3.1%, 38.6%)	9.2%	(6.9%, 12.3%)
Lancaster County	51103	4.0%	(2.0%, 42.1%)	10.4%	(7.8%, 13.8%)
Mathews County	51115	18.5%	(4.9%, 50.1%)	10.9%	(8.3%, 14.2%)
Middlesex County	51119	18.5%	(7.0%, 40.8%)	13.1%	(9.5%, 17.8%)
Northampton County	51131	10.2%	(5.6%, 26.7%)	12.0%	(8.2%, 17.2%)
Northumberland County	51133	8.3%	(2.2%, 26.7%)	10.6%	(7.8%, 14.1%)
Richmond County	51159	37.9%	(15.2%, 67.5%)	12.7%	(9.6%, 16.7%)
Southampton County	51175	5.5%	(0.9%, 28.2%)	10.4%	(8.0%, 13.4%)
Westmoreland County	51193	20.5%	(7.2%, 46.4%)	10.3%	(7.7%, 13.6%)
York County	51199	8.4%	(3.0%, 20.9%)	10.6%	(8.4%, 13.4%)
Chesapeake City	51550	21.0%	(13.5%, 31.1%)	18.0%	(16.3%, 19.8%)
Franklin City	51620	13.5%	(4.1%, 36.2%)	9.0%	(4.3%, 18.1%)
Hampton City	51650	19.9%	(12.6%, 29.9%)	17.8%	(15.3%, 20.7%)
Newport News City	51700	16.2%	(9.6%, 26.0%)	16.6%	(14.7%, 18.7%)
Norfolk City	51710	23.3%	(16.0%, 32.7%)	21.2%	(18.8%, 23.8%)
Poquoson City	51735	15.1%	(1.8%, 63.3%)	9.5%	(7.1%, 12.6%)
Portsmouth City	51740	22.0%	(13.4%, 33.8%)	20.9%	(18.6%, 23.3%)
Suffolk City	51800	12.6%	(5.9%, 24.8%)	15.6%	(14.4%, 16.8%)
Virginia Beach City	51810	17.1%	(12.2%, 23.4%)	15.0%	(13.3%, 16.8%)
Williamsburg City	51830	0.0%	(0.0%, 64.5%)	5.3%	(2.3%, 11.9%)

Graphical representation

Ever had asthma
Central Shenandoah and Lord Fairfax HDs

County		2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
Augusta County		11.2 | 13.1 | 15.2
Bath County		4.4 | 7.8 | 13.5
Highland County		3.3 | 6.2 | 11.4
Rockbridge County		18.3 | 22.1 | 26.4
Rockingham County		10.6 | 12.3 | 14.3
Buena Vista City		13.7 | 17.2 | 21.3
Harrisonburg City		14.3 | 16.4 | 18.7
Lexington City		2.1 | 4.9 | 10.9
Staunton City		4.3 | 7.2 | 11.9
Waynesboro City		14.0 | 17.6 | 22.0
Clarke County		5.1 | 9.4 | 16.8
Frederick County		8.0 | 9.3 | 10.7
Page County		5.6 | 7.8 | 10.7
Shenandoah County		12.2 | 15.1 | 18.5
Warren County		14.9 | 18.1 | 21.7
Winchester City		5.3 | 9.3 | 15.9

% incidence rate

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

County	LCB | Point | UCB
Caroline County	6.3 | 7.9 | 9.9
King George County	5.2 | 6.8 | 8.8
Spotsylvania County	10.6 | 11.9 | 13.3
Stafford County	10.4 | 11.4 | 12.5
Fredericksburg City	16.2 | 19.1 | 22.4
Culpeper County	11.0 | 13.9 | 17.4
Fauquier County	10.7 | 12.1 | 13.7
Madison County	12.2 | 14.8 | 17.8
Orange County	8.6 | 11.3 | 14.7
Rappahannock County	14.0 | 16.9 | 20.3

% incidence rate

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
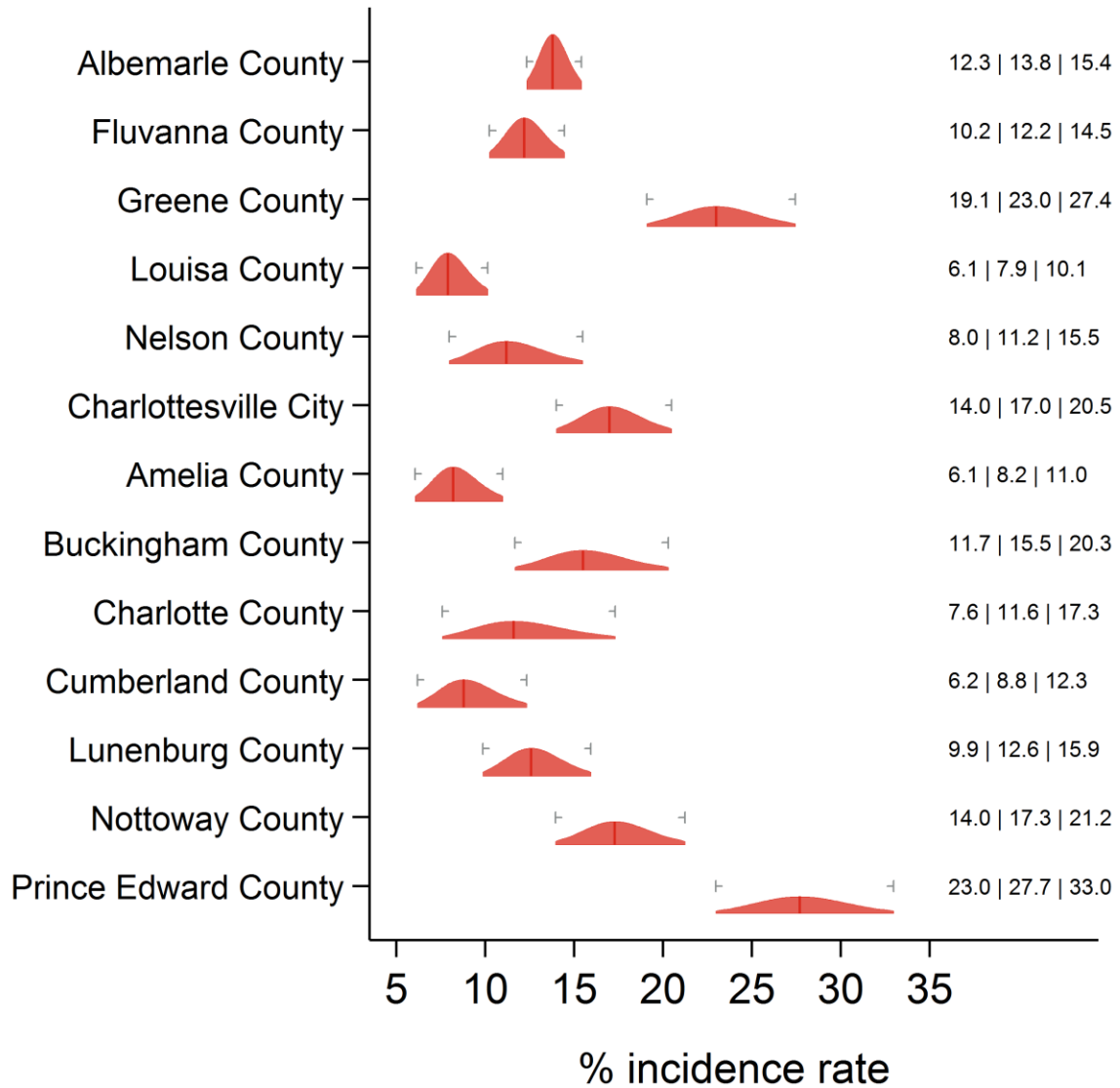
County	LCB	Point	UCB
Albemarle County	12.3	13.8	15.4
Fluvanna County	10.2	12.2	14.5
Greene County	19.1	23.0	27.4
Louisa County	6.1	7.9	10.1
Nelson County	8.0	11.2	15.5
Charlottesville City	14.0	17.0	20.5
Amelia County	6.1	8.2	11.0
Buckingham County	11.7	15.5	20.3
Charlotte County	7.6	11.6	17.3
Cumberland County	6.2	8.8	12.3
Lunenburg County	9.9	12.6	15.9
Nottoway County	14.0	17.3	21.2
Prince Edward County	23.0	27.7	33.0

% incidence rate

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

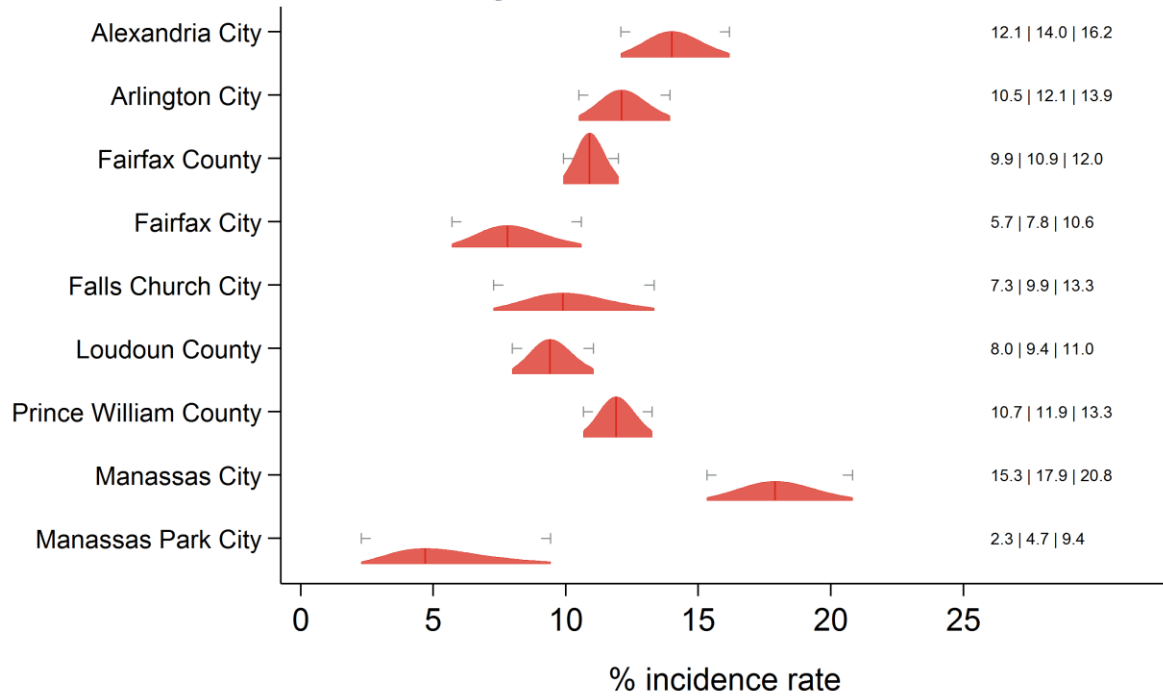|	
Alexandria City	12.1 | 14.0 | 16.2
Arlington City	10.5 | 12.1 | 13.9
Fairfax County	9.9 | 10.9 | 12.0
Fairfax City	5.7 | 7.8 | 10.6
Falls Church City	7.3 | 9.9 | 13.3
Loudoun County	8.0 | 9.4 | 11.0
Prince William County	10.7 | 11.9 | 13.3
Manassas City	15.3 | 17.9 | 20.8
Manassas Park City	2.3 | 4.7 | 9.4

% incidence rate

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

County	LCB | Point | UCB
Alleghany County	11.7 | 14.3 | 17.4
Botetourt County	5.2 | 6.9 | 9.1
Craig County	10.1 | 13.1 | 16.8
Roanoke County	11.0 | 12.3 | 13.7
Covington City	1.8 | 8.9 | 34.6
Salem City	16.1 | 18.0 | 20.1
Amherst County	17.2 | 20.0 | 23.2
Appomattox County	12.9 | 15.6 | 18.7
Bedford County	8.6 | 10.1 | 11.9
Campbell County	10.2 | 12.0 | 14.0
Lynchburg City	12.2 | 15.1 | 18.5
Roanoke City	14.6 | 17.1 | 19.9

% incidence rate

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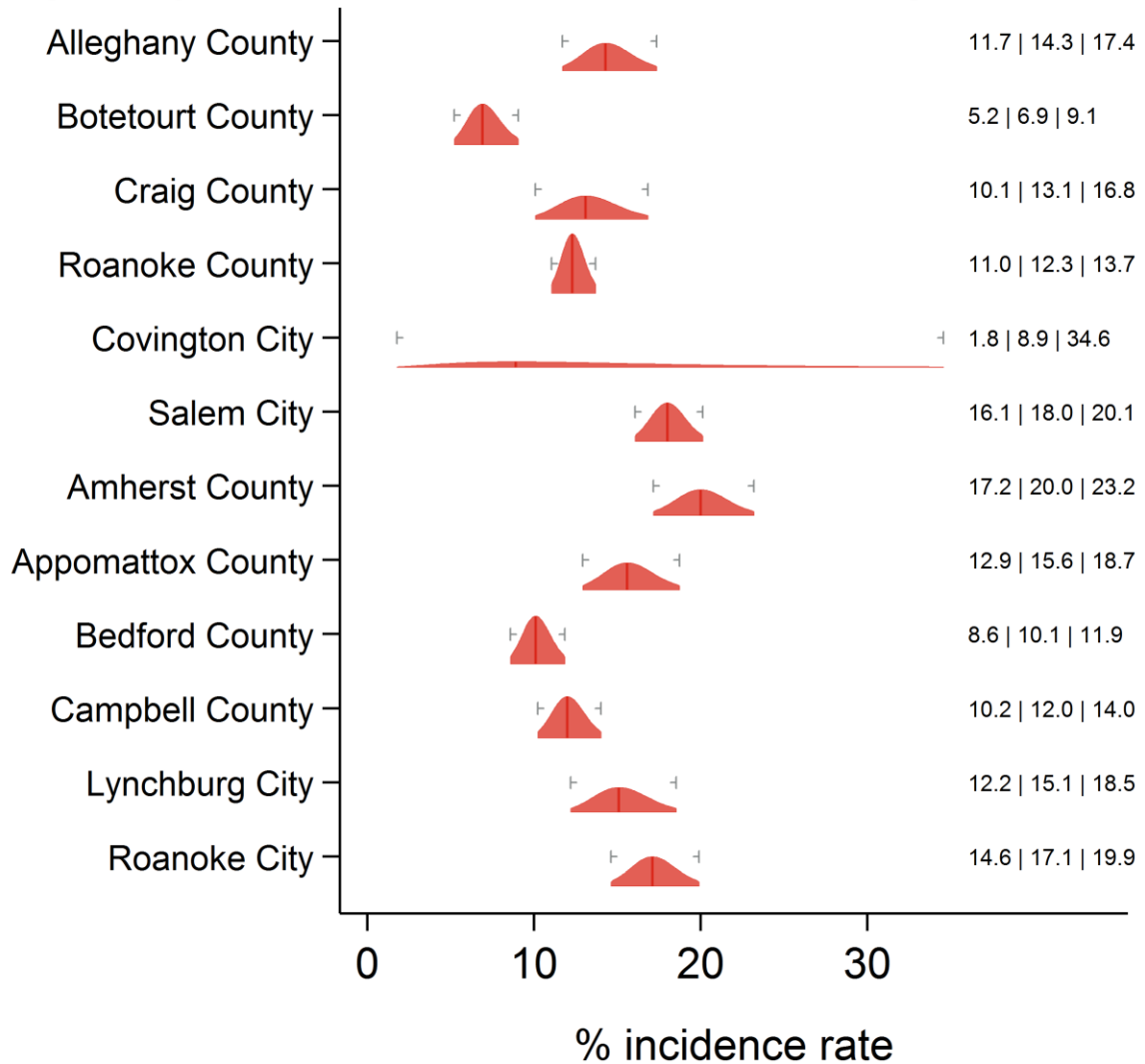Gray markers: 95% confidence interval

Ever had asthma
Cumberland Plateau and Lenowisco HDs

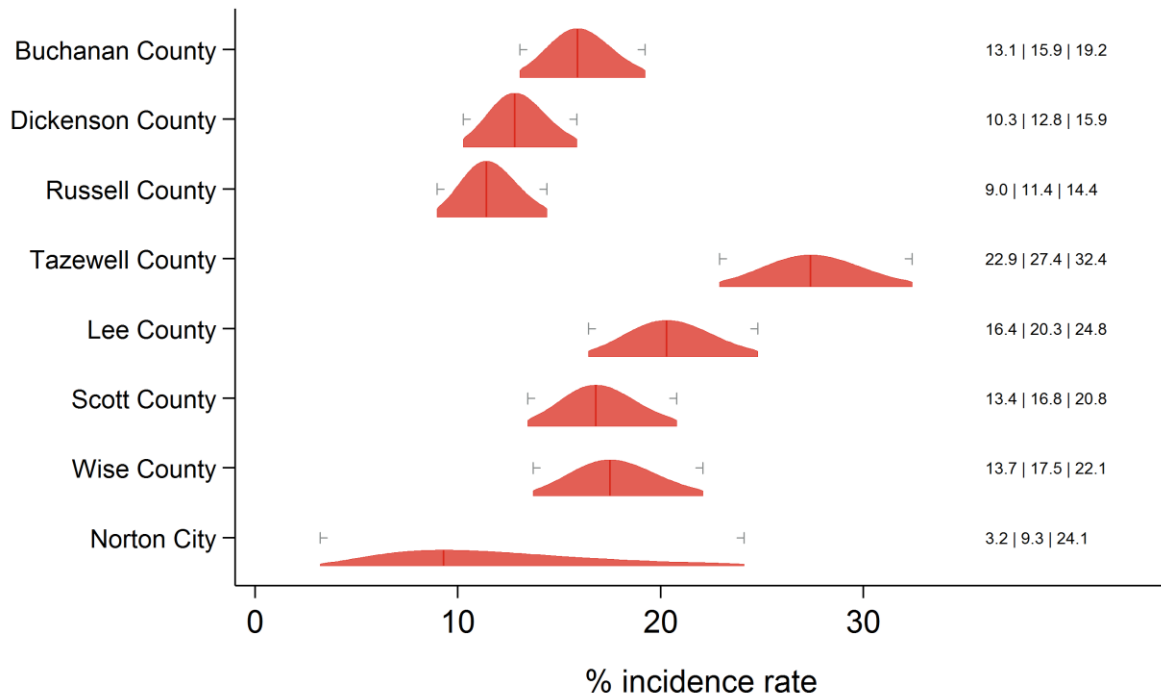| County	LCB	Point Estimate	UCB
Buchanan County	13.1	15.9	19.2
Dickenson County	10.3	12.8	15.9
Russell County	9.0	11.4	14.4
Tazewell County	22.9	27.4	32.4
Lee County	16.4	20.3	24.8
Scott County	13.4	16.8	20.8
Wise County	13.7	17.5	22.1
Norton City	3.2	9.3	24.1

% incidence rate

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

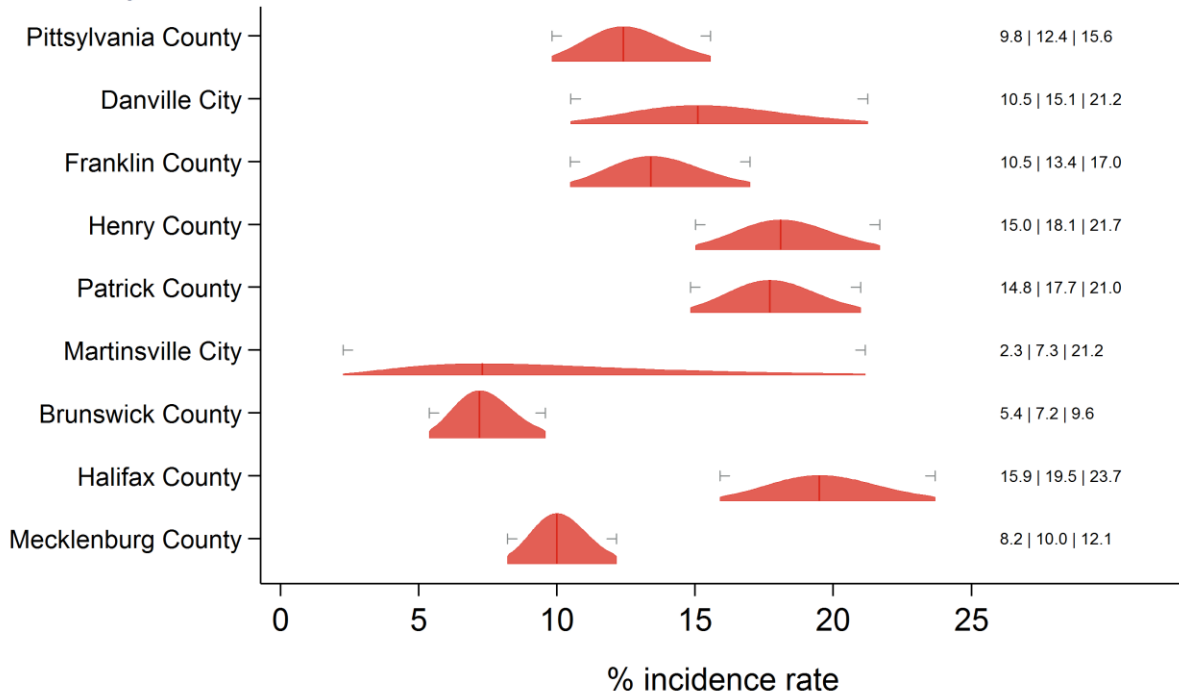| County	LCB | Point | UCB
Pittsylvania County	9.8 | 12.4 | 15.6
Danville City	10.5 | 15.1 | 21.2
Franklin County	10.5 | 13.4 | 17.0
Henry County	15.0 | 18.1 | 21.7
Patrick County	14.8 | 17.7 | 21.0
Martinsville City	2.3 | 7.3 | 21.2
Brunswick County	5.4 | 7.2 | 9.6
Halifax County	15.9 | 19.5 | 23.7
Mecklenburg County	8.2 | 10.0 | 12.1

% incidence rate

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

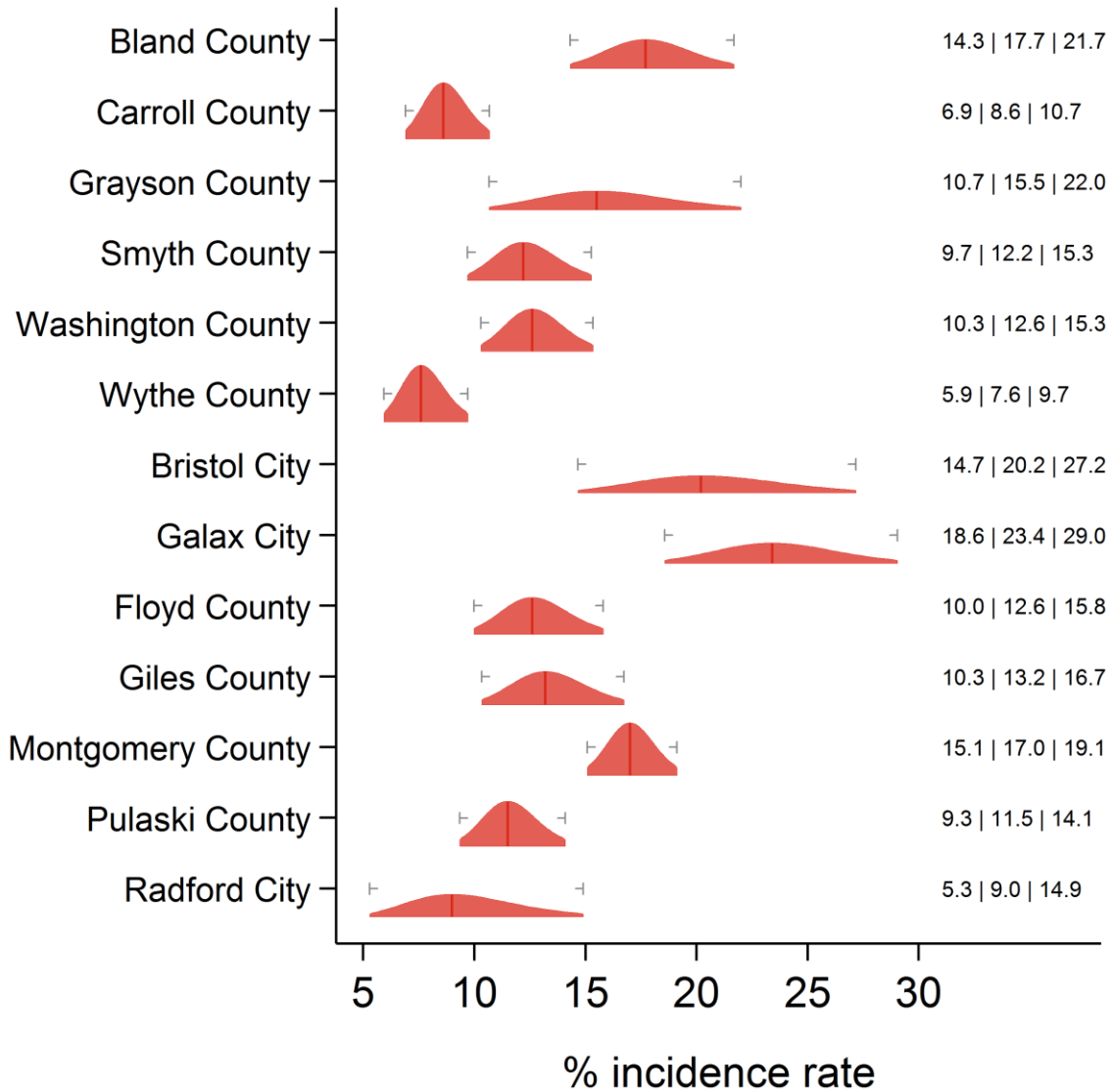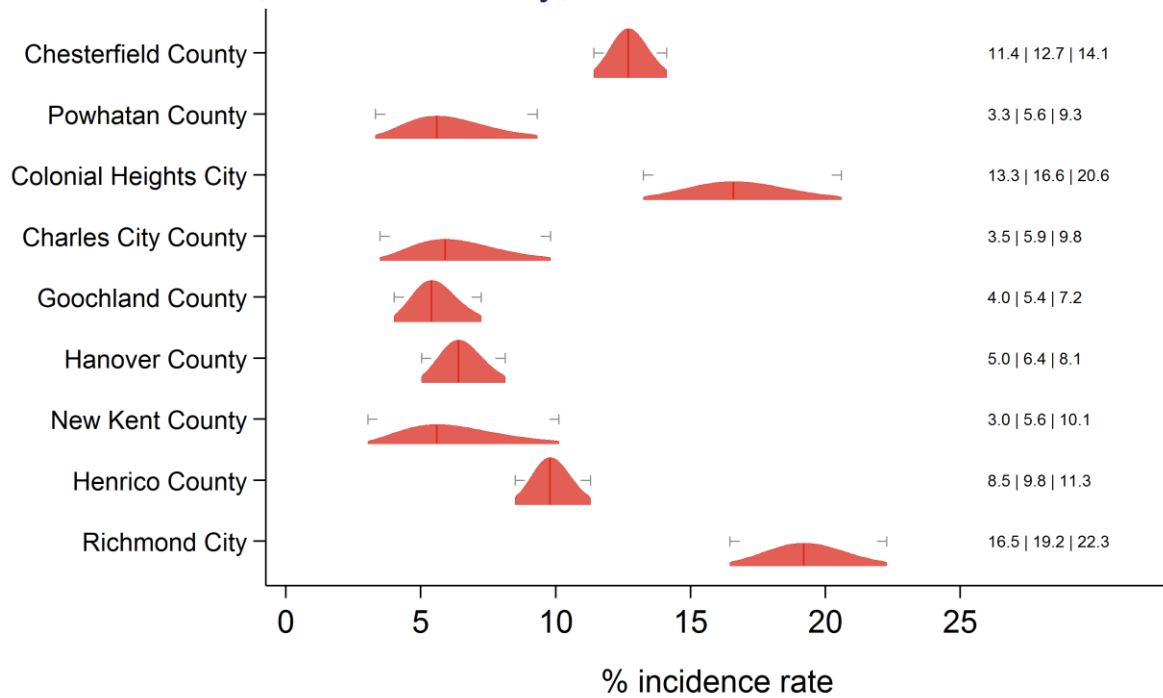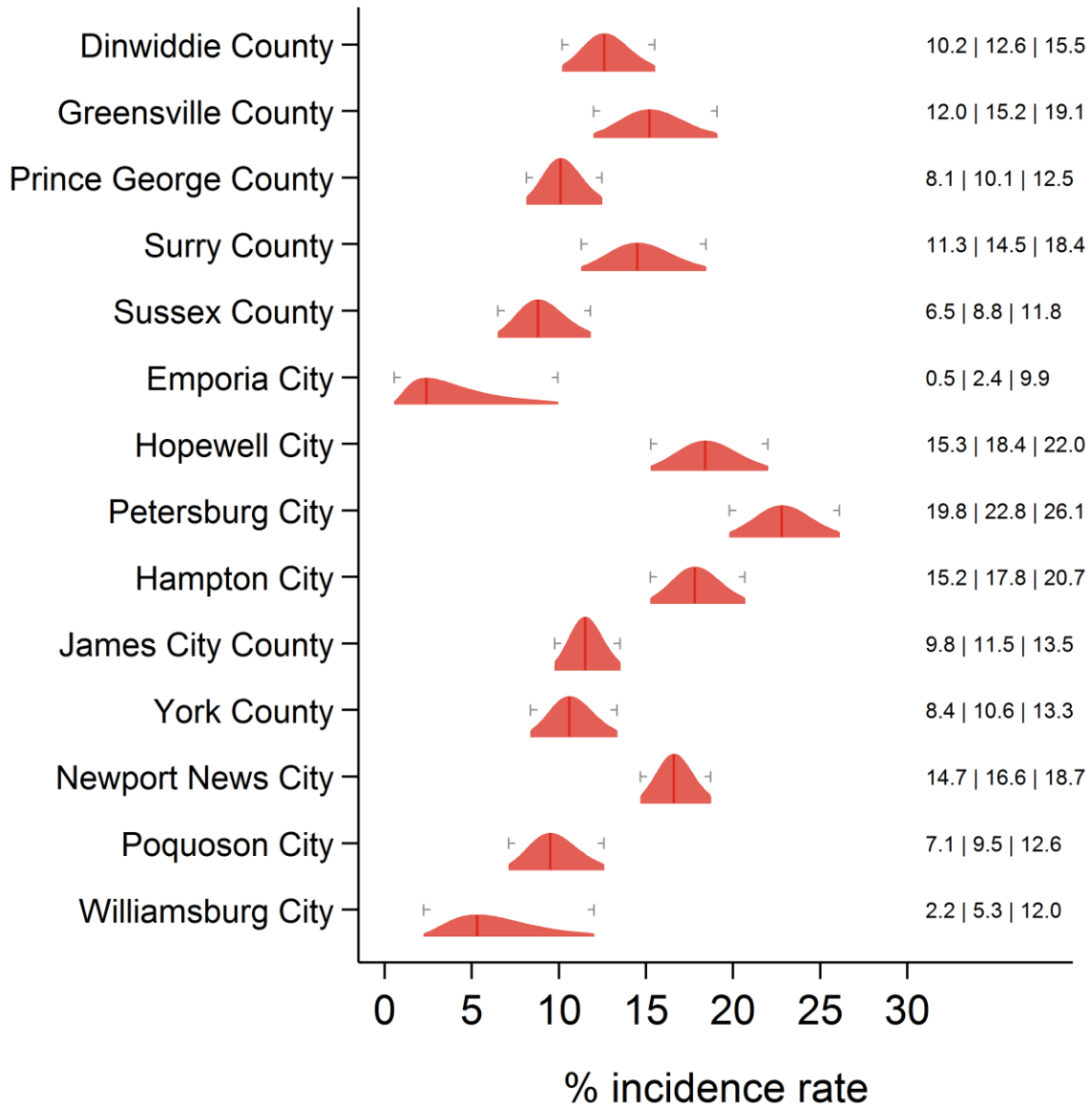| County/City	LCB	Point Estimate	UCB
Bland County	14.3	17.7	21.7
Carroll County	6.9	8.6	10.7
Grayson County	10.7	15.5	22.0
Smyth County	9.7	12.2	15.3
Washington County	10.3	12.6	15.3
Wythe County	5.9	7.6	9.7
Bristol City	14.7	20.2	27.2
Galax City	18.6	23.4	29.0
Floyd County	10.0	12.6	15.8
Giles County	10.3	13.2	16.7
Montgomery County	15.1	17.0	19.1
Pulaski County	9.3	11.5	14.1
Radford City	5.3	9.0	14.9

% incidence rate

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

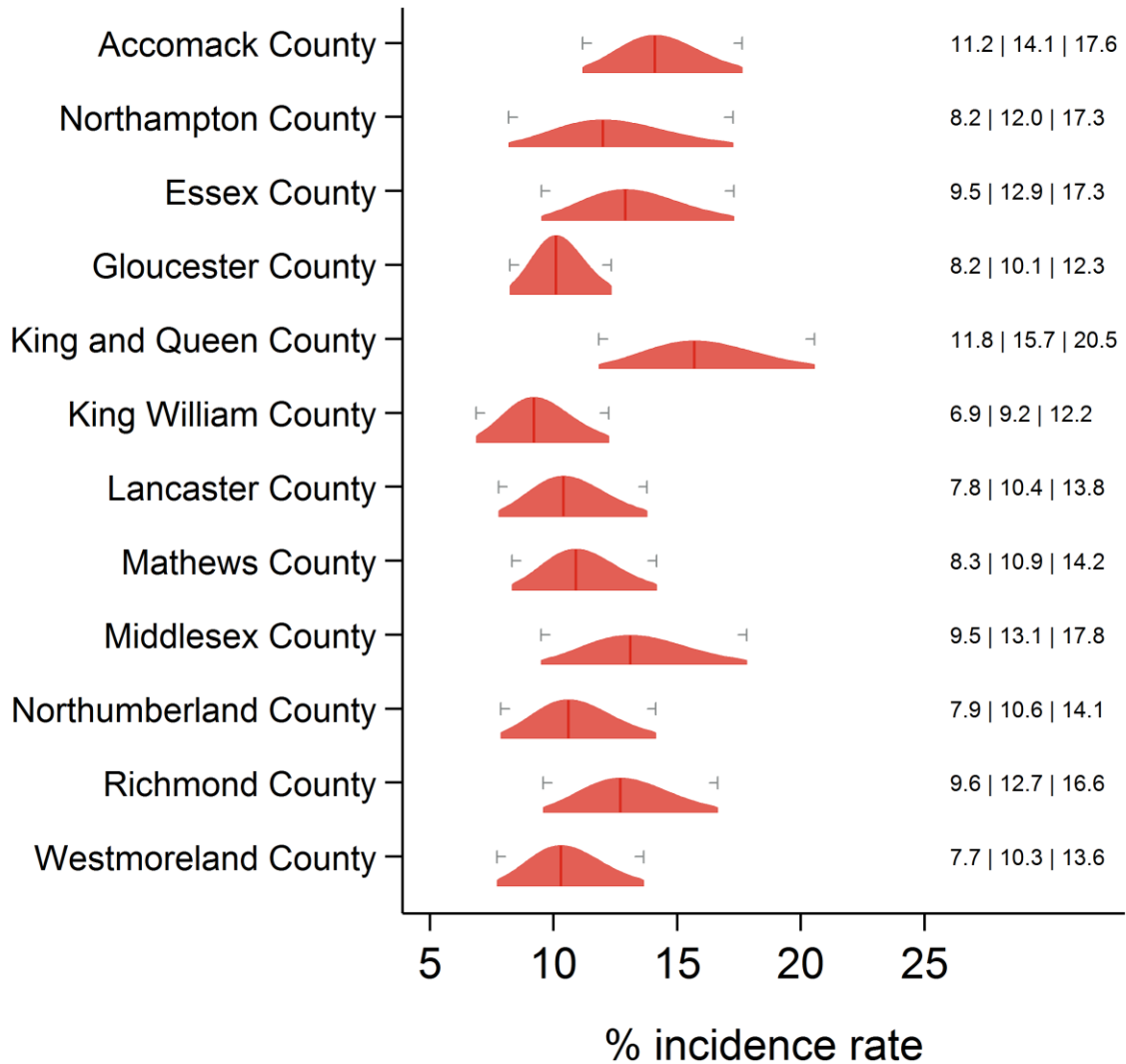| County/City	LCB | Point | UCB
Chesterfield County	11.4 | 12.7 | 14.1
Powhatan County	3.3 | 5.6 | 9.3
Colonial Heights City	13.3 | 16.6 | 20.6
Charles City County	3.5 | 5.9 | 9.8
Goochland County	4.0 | 5.4 | 7.2
Hanover County	5.0 | 6.4 | 8.1
New Kent County	3.0 | 5.6 | 10.1
Henrico County	8.5 | 9.8 | 11.3
Richmond City	16.5 | 19.2 | 22.3

% incidence rate

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

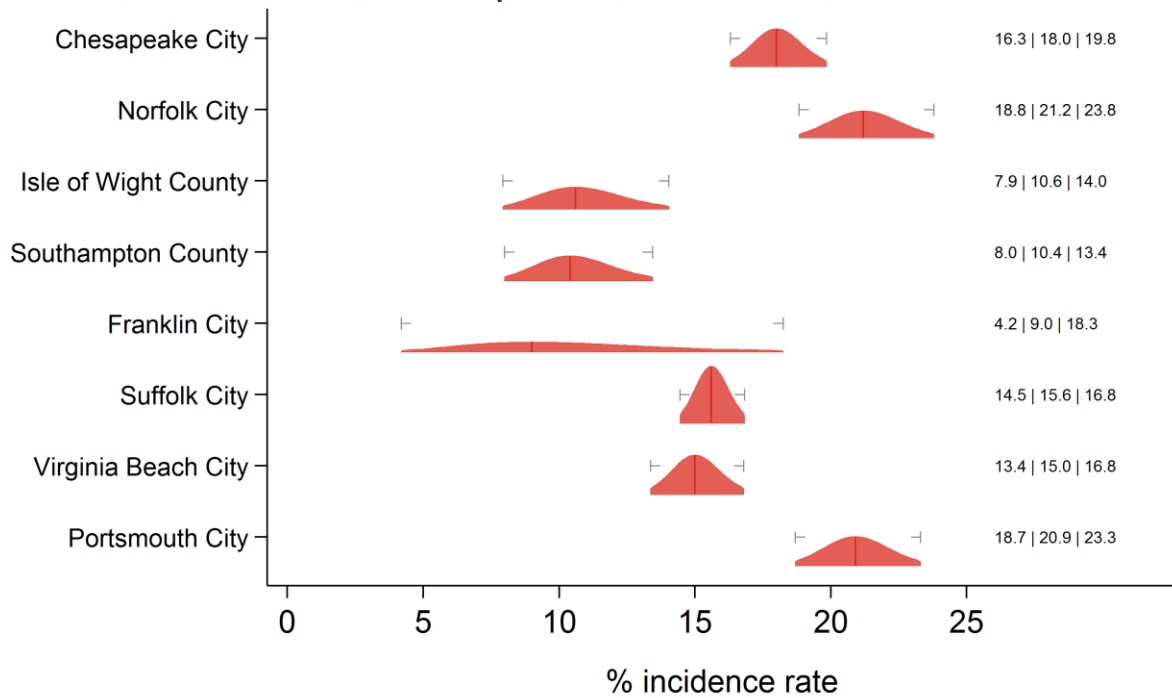| Location	LCB | Point | UCB
Dinwiddie County	10.2 | 12.6 | 15.5
Greensville County	12.0 | 15.2 | 19.1
Prince George County	8.1 | 10.1 | 12.5
Surry County	11.3 | 14.5 | 18.4
Sussex County	6.5 | 8.8 | 11.8
Emporia City	0.5 | 2.4 | 9.9
Hopewell City	15.3 | 18.4 | 22.0
Petersburg City	19.8 | 22.8 | 26.1
Hampton City	15.2 | 17.8 | 20.7
James City County	9.8 | 11.5 | 13.5
York County	8.4 | 10.6 | 13.3
Newport News City	14.7 | 16.6 | 18.7
Poquoson City	7.1 | 9.5 | 12.6
Williamsburg City	2.2 | 5.3 | 12.0

% incidence rate

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

County	2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
Accomack County	11.2 | 14.1 | 17.6
Northampton County	8.2 | 12.0 | 17.3
Essex County	9.5 | 12.9 | 17.3
Gloucester County	8.2 | 10.1 | 12.3
King and Queen County	11.8 | 15.7 | 20.5
King William County	6.9 | 9.2 | 12.2
Lancaster County	7.8 | 10.4 | 13.8
Mathews County	8.3 | 10.9 | 14.2
Middlesex County	9.5 | 13.1 | 17.8
Northumberland County	7.9 | 10.6 | 14.1
Richmond County	9.6 | 12.7 | 16.6
Westmoreland County	7.7 | 10.3 | 13.6

% incidence rate

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

Chesapeake City	16.3 | 18.0 | 19.8
Norfolk City	18.8 | 21.2 | 23.8
Isle of Wight County	7.9 | 10.6 | 14.0
Southampton County	8.0 | 10.4 | 13.4
Franklin City	4.2 | 9.0 | 18.3
Suffolk City	14.5 | 15.6 | 16.8
Virginia Beach City	13.4 | 15.0 | 16.8
Portsmouth City	18.7 | 20.9 | 23.3

% incidence rate

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: 43 areas.

Direct estimate is outside the 95% SAE Wilson CI: 90 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: 123 areas.

SAE Wilson 95% CI partially overlaps with the 95% direct Wilson CI: 10 areas.

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

SAE standard error is less that the direct standard error: 123 areas.

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

Direct standard error is zero: 9 areas.

Proportion of SAE variance due to ACS sampling error: min = 0.03%; med = 1.97%; max = 19.27%.

Proportion of SAE variance due to sampling error in regression coefficient estimates: min = 55.00%; med = 90.59%; max = 99.13%.

Proportion of SAE variance due to model selection: min = 0.11%; med = 5.52%; max = 43.39%.

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