Indicator 10: Ever had asthma

Internal variable name: outc10_asthma

Section 1: Definition

Definition: (Ever told) you had asthma?

Section 2: Predictive models

	Mixed, demos only	Logit, no area effects	Mixed with area covariates
	b/se	b/se	b/se
Outcome 10: Ever had asthma			
Non-Hispanic Black vs. Non-Hispanic White	0.1677	0.1281	0.1281
	(0.1107)	(0.1197)	(0.1081)
Non-Hispanic Asian vs. Non-Hispanic White	-0.4621	-0.4858	-0.4858
	(0.4014)	(0.3665)	(0.3872)
Non-Hispanic Other vs. Non-Hispanic White	0.3958*	0.4010*	0.4010*
	(0.1617)	(0.1824)	(0.1604)
Hispanic vs. Non-Hispanic White	-0.1437	-0.1205	-0.1205
	(0.2177)	(0.2502)	(0.2160)
Female	0.4571***	0.4527***	0.4527***
	(0.1085)	(0.0948)	(0.1088)
Age 18-24 vs. 65+	0.5324**	0.5208**	0.5208**
	(0.1774)	(0.1634)	(0.1762)
Age 25-34 vs. 65+	0.1197	0.1211	0.1211
	(0.1459)	(0.1453)	(0.1486)
Age 35-44 vs. 65+	0.0311	0.0352	0.0352
	(0.1195)	(0.1401)	(0.1195)
Age 45-54 vs. 65+	0.0718	0.0743	0.0743
	(0.1183)	(0.1200)	(0.1168)
Age 55-64 vs. 65+	0.0103	0.0012	0.0012
	(0.1158)	(0.1137)	(0.1147)
Oral Cancer Female Rate		-0.0184	-0.0184
		(0.0161)	(0.0166)
% rent >30% of income		0.0220*	0.0220*
		(0.0104)	(0.0100)
Esophagus Cancer Male Rate		0.0745	0.0745
		(0.0510)	(0.0517)
{% rent >30% of income}		-0.0012	-0.0012

interacted with {Esophagus Cancer Male Rate}		(0.0010)	(0.0011)
Non-stratified water domain index		0.2883***	0.2883***
		(0.0867)	(0.0853)
{Oral Cancer Female Rate}		-0.0379**	-0.0379**
interacted with {Non-stratified water domain index}		(0.0127)	(0.0127)
Intercept	-2.3210***	-3.4173***	-3.4173***
	(0.1162)	(0.5166)	(0.4881)
Area effect variance	0.0299		0.0000
	(0.0274)		(0.0000)

Number of alternative models used to estimate model error = 6.

Section 3: Results

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Augusta County	51015	8.0%	(4.4%, 14.0%)	9.8%	(8.3%, 11.6%)
Bath County	51017	4.3%	(1.7%, 39.0%)	6.4%	(3.5%, 11.4%)
Caroline County	51033	12.5%	(5.3%, 32.5%)	14.2%	(8.6%, 22.6%)
Clarke County	51043	6.7%	(1.1%, 32.4%)	14.4%	(10.7%, 19.0%)
Culpeper County	51047	10.1%	(4.7%, 20.4%)	13.6%	(11.7%, 15.8%)
Fauquier County	51061	17.8%	(10.0%, 29.6%)	14.4%	(11.8%, 17.4%)
Frederick County	51069	16.9%	(10.1%, 26.8%)	12.3%	(10.1%, 14.8%)
Highland County	51091	0.0%	(0.0%, 83.2%)	5.2%	(3.1%, 8.6%)
King George County	51099	13.6%	(5.0%, 39.3%)	16.9%	(11.9%, 23.4%)
Madison County	51113	4.8%	(2.3%, 25.3%)	11.3%	(8.0%, 15.6%)
Orange County	51137	18.3%	(6.3%, 42.8%)	12.5%	(10.0%, 15.5%)
Page County	51139	38.8%	(14.4%, 70.4%)	13.0%	(10.6%, 15.8%)
Rappahannock County	51157	32.0%	(11.9%, 62.2%)	13.5%	(9.8%, 18.3%)
Rockbridge County	51163	28.3%	(13.5%, 50.1%)	12.7%	(10.2%, 15.7%)
Rockingham County	51165	4.4%	(2.4%, 11.1%)	9.1%	(7.6%, 10.7%)
Shenandoah County	51171	22.6%	(11.2%, 40.2%)	13.6%	(11.8%, 15.6%)
Spotsylvania County	51177	11.7%	(5.8%, 22.1%)	12.0%	(10.8%, 13.3%)
Stafford County	51179	16.2%	(9.8%, 25.6%)	14.4%	(12.5%, 16.6%)
Warren County	51187	2.8%	(1.6%, 17.1%)	13.2%	(10.8%, 16.0%)
Buena Vista City	51530	0.0%	(-0.0%, 89.6%)	11.1%	(5.7%, 20.7%)
Fredericksburg City	51630	12.5%	(5.9%, 33.7%)	11.9%	(10.1%, 13.9%)
Harrisonburg City	51660	21.8%	(4.8%, 60.4%)	12.0%	(10.2%, 13.9%)
Lexington City	51678	0.0%	(0.0%, 99.4%)	61.4%	(28.6%, 86.3%)
Staunton City	51790	30.2%	(6.8%, 71.8%)	11.8%	(9.7%, 14.3%)
Waynesboro City	51820	49.7%	(21.0%, 78.6%)	15.3%	(9.2%, 24.3%)
Winchester City	51840	9.6%	(2.1%, 34.2%)	10.1%	(7.7%, 13.1%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Albemarle County	51003	10.1%	(4.9%, 19.7%)	12.2%	(10.8%, 13.7%)
Alleghany County	51005	12.1%	(4.4%, 29.2%)	7.6%	(6.1%, 9.4%)
Amherst County	51009	12.5%	(4.7%, 29.3%)	10.5%	(9.1%, 12.0%)
Appomattox County	51011	7.5%	(1.6%, 29.4%)	10.3%	(8.6%, 12.2%)
Arlington City	51013	12.2%	(7.3%, 19.7%)	9.9%	(8.3%, 11.9%)
Bedford County	51019	11.5%	(5.5%, 22.5%)	12.4%	(9.7%, 15.7%)
Botetourt County	51023	4.4%	(1.1%, 16.2%)	8.3%	(6.3%, 11.0%)
Campbell County	51031	19.5%	(9.6%, 35.4%)	9.5%	(8.1%, 11.2%)
Craig County	51045	0.0%	(0.0%, 73.6%)	22.4%	(8.1%, 48.7%)
Fairfax County	51059	8.8%	(6.1%, 12.6%)	9.8%	(8.0%, 11.9%)
Fluvanna County	51065	22.9%	(7.2%, 53.1%)	15.4%	(10.6%, 21.9%)
Greene County	51079	0.0%	(0.0%, 21.7%)	9.5%	(7.5%, 11.8%)
Loudoun County	51107	14.0%	(9.0%, 21.2%)	10.4%	(8.7%, 12.2%)
Louisa County	51109	4.7%	(1.8%, 19.3%)	12.2%	(10.1%, 14.6%)
Nelson County	51125	8.4%	(2.2%, 27.7%)	11.4%	(9.6%, 13.5%)
Prince William County	51153	11.9%	(6.5%, 20.5%)	12.4%	(10.6%, 14.4%)
Roanoke County	51161	13.7%	(8.4%, 21.7%)	12.2%	(10.5%, 14.2%)
Alexandria City	51510	10.1%	(5.8%, 17.2%)	8.7%	(7.3%, 10.3%)
Charlottesville City	51540	5.2%	(2.5%, 29.0%)	20.1%	(16.0%, 25.0%)
Covington City	51580	0.0%	(0.0%, 99.4%)	11.8%	(8.9%, 15.5%)
Fairfax City	51600	14.9%	(7.8%, 26.6%)	14.7%	(12.2%, 17.6%)
Falls Church City	51610	0.0%	(0.0%, 62.3%)	6.5%	(5.0%, 8.4%)
Lynchburg City	51680	8.7%	(2.4%, 27.0%)	12.1%	(10.0%, 14.6%)
Manassas City	51683	0.0%	(0.0%, 31.6%)	11.9%	(10.2%, 13.8%)
Manassas Park City	51685	81.9%	(2.5%, 99.6%)	7.6%	(6.1%, 9.4%)
Salem City	51775	19.9%	(5.0%, 54.0%)	14.6%	(12.8%, 16.7%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Bland County	51021	18.3%	(4.0%, 54.7%)	7.2%	(5.8%, 9.1%)
Buchanan County	51027	24.2%	(13.3%, 39.9%)	13.4%	(10.5%, 16.8%)
Carroll County	51035	17.7%	(7.9%, 34.9%)	15.4%	(12.5%, 18.8%)
Dickenson County	51051	8.1%	(3.8%, 23.5%)	11.2%	(8.7%, 14.4%)
Floyd County	51063	16.1%	(7.1%, 32.5%)	11.5%	(8.5%, 15.5%)
Franklin County	51067	20.4%	(7.4%, 45.1%)	14.4%	(11.0%, 18.5%)
Giles County	51071	9.8%	(3.3%, 26.0%)	16.5%	(12.3%, 21.6%)
Grayson County	51077	11.9%	(5.1%, 34.7%)	7.6%	(6.1%, 9.4%)
Henry County	51089	11.2%	(7.1%, 20.3%)	13.9%	(11.8%, 16.4%)
Lee County	51105	5.2%	(2.8%, 20.9%)	12.5%	(10.9%, 14.2%)
Montgomery County	51121	14.4%	(7.6%, 25.6%)	15.2%	(12.8%, 18.0%)
Patrick County	51141	1.2%	(0.7%, 16.3%)	8.8%	(7.2%, 10.7%)
Pittsylvania County	51143	14.9%	(8.5%, 24.8%)	16.6%	(13.9%, 19.8%)
Pulaski County	51155	14.2%	(6.7%, 27.8%)	15.7%	(12.9%, 19.0%)
Russell County	51167	13.4%	(6.1%, 26.7%)	13.5%	(11.3%, 16.0%)
Scott County	51169	13.9%	(7.0%, 25.7%)	11.4%	(9.4%, 13.7%)
Smyth County	51173	16.9%	(8.1%, 31.9%)	12.5%	(11.0%, 14.2%)
Tazewell County	51185	7.7%	(3.4%, 16.6%)	9.9%	(8.5%, 11.5%)
Washington County	51191	7.8%	(3.5%, 16.4%)	9.2%	(7.8%, 10.7%)
Wise County	51195	23.9%	(14.1%, 37.5%)	15.9%	(13.4%, 18.8%)
Wythe County	51197	3.5%	(1.6%, 13.8%)	10.1%	(8.1%, 12.6%)
Bristol City	51520	20.4%	(6.4%, 58.3%)	12.9%	(9.2%, 17.9%)
Danville City	51590	14.4%	(4.1%, 40.2%)	14.2%	(11.2%, 17.7%)
Galax City	51640	0.0%	(0.0%, 70.9%)	6.9%	(5.2%, 8.9%)
Martinsville City	51690	0.0%	(0.0%, 47.8%)	9.5%	(7.6%, 11.9%)
Norton City	51720	0.0%	(0.0%, 69.6%)	24.8%	(10.9%, 47.1%)
Radford City	51750	33.7%	(6.3%, 79.2%)	25.2%	(18.2%, 33.8%)
Roanoke City	51770	15.6%	(8.8%, 26.3%)	14.8%	(12.6%, 17.3%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Amelia County	51007	1.7%	(0.9%, 24.9%)	14.1%	(11.5%, 17.2%)
Brunswick County	51025	15.9%	(4.7%, 42.1%)	15.2%	(11.3%, 20.0%)
Buckingham County	51029	39.1%	(17.2%, 66.6%)	27.1%	(19.5%, 36.2%)
Charles City County	51036	7.1%	(1.9%, 44.3%)	11.4%	(8.7%, 14.8%)
Charlotte County	51037	29.3%	(8.7%, 64.3%)	12.5%	(10.9%, 14.4%)
Chesterfield County	51041	10.7%	(7.5%, 15.1%)	11.2%	(10.1%, 12.5%)
Cumberland County	51049	16.4%	(5.0%, 42.4%)	14.9%	(11.1%, 19.7%)
Dinwiddie County	51053	5.2%	(3.3%, 21.2%)	9.1%	(6.5%, 12.7%)
Goochland County	51075	18.9%	(4.0%, 56.8%)	13.6%	(11.3%, 16.4%)
Greensville County	51081	12.1%	(1.7%, 51.8%)	8.6%	(7.0%, 10.5%)
Halifax County	51083	5.6%	(3.6%, 15.6%)	16.1%	(12.7%, 20.1%)
Hanover County	51085	11.1%	(6.2%, 19.1%)	14.8%	(12.3%, 17.8%)
Henrico County	51087	10.6%	(7.3%, 15.2%)	13.8%	(12.0%, 15.8%)
Lunenburg County	51111	17.1%	(5.0%, 44.8%)	11.3%	(9.1%, 13.8%)
Mecklenburg County	51117	14.8%	(5.0%, 36.1%)	15.7%	(12.8%, 19.2%)
New Kent County	51127	2.2%	(1.1%, 24.3%)	8.3%	(5.9%, 11.8%)
Nottoway County	51135	17.0%	(3.6%, 52.6%)	13.4%	(6.3%, 26.4%)
Powhatan County	51145	0.0%	(-0.0%, 32.8%)	13.3%	(11.5%, 15.4%)
Prince Edward County	51147	29.4%	(12.4%, 55.1%)	17.2%	(12.9%, 22.4%)
Prince George County	51149	10.7%	(2.2%, 38.4%)	12.4%	(11.1%, 13.9%)
Surry County	51181	16.7%	(2.8%, 57.8%)	7.3%	(5.6%, 9.4%)
Sussex County	51183	14.5%	(5.5%, 33.0%)	9.7%	(7.8%, 12.0%)
Colonial Heights City	51570	31.4%	(8.7%, 68.6%)	15.0%	(13.2%, 17.0%)
Emporia City	51595	0.0%	(0.0%, 68.6%)	9.2%	(7.5%, 11.4%)
Hopewell City	51670	3.8%	(0.6%, 20.1%)	9.1%	(7.4%, 11.1%)
Petersburg City	51730	6.5%	(2.0%, 18.8%)	13.7%	(10.5%, 17.6%)
Richmond City	51760	12.7%	(8.2%, 19.2%)	13.8%	(12.2%, 15.7%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Accomack County	51001	17.2%	(8.6%, 31.6%)	12.6%	(10.1%, 15.7%)
Essex County	51057	16.3%	(3.2%, 53.8%)	10.5%	(8.6%, 12.7%)
Gloucester County	51073	19.7%	(8.6%, 39.1%)	12.4%	(10.5%, 14.7%)
Isle of Wight County	51093	11.2%	(5.0%, 23.3%)	13.7%	(12.1%, 15.3%)
James City County	51095	14.7%	(7.4%, 27.3%)	14.1%	(12.0%, 16.6%)
King and Queen County	51097	56.8%	(16.4%, 89.8%)	12.3%	(6.3%, 22.6%)
King William County	51101	25.2%	(8.4%, 55.4%)	14.3%	(12.1%, 16.8%)
Lancaster County	51103	16.1%	(4.3%, 44.9%)	12.4%	(10.9%, 14.2%)
Mathews County	51115	29.8%	(13.4%, 53.8%)	11.4%	(7.6%, 16.7%)
Middlesex County	51119	0.0%	(-0.0%, 48.1%)	19.4%	(13.0%, 28.0%)
Northampton County	51131	12.9%	(3.1%, 40.6%)	13.1%	(11.4%, 15.1%)
Northumberland County	51133	39.8%	(18.6%, 65.6%)	18.0%	(7.3%, 38.0%)
Richmond County	51159	23.6%	(10.6%, 44.6%)	12.1%	(9.8%, 14.8%)
Southampton County	51175	7.4%	(1.8%, 26.1%)	12.4%	(10.0%, 15.3%)
Westmoreland County	51193	11.9%	(3.6%, 32.8%)	10.8%	(8.8%, 13.2%)
York County	51199	2.1%	(0.9%, 10.4%)	11.7%	(9.8%, 14.0%)
Chesapeake City	51550	12.0%	(7.9%, 17.8%)	11.4%	(10.2%, 12.8%)
Franklin City	51620	11.4%	(3.3%, 33.1%)	12.3%	(8.3%, 17.9%)
Hampton City	51650	20.3%	(12.8%, 30.6%)	19.7%	(16.8%, 23.0%)
Newport News City	51700	17.4%	(11.0%, 26.5%)	13.2%	(11.9%, 14.5%)
Norfolk City	51710	10.9%	(6.2%, 18.4%)	14.8%	(12.8%, 17.0%)
Poquoson City	51735	11.9%	(2.3%, 62.6%)	9.2%	(7.6%, 11.0%)
Portsmouth City	51740	15.4%	(9.3%, 24.5%)	11.5%	(9.4%, 13.9%)
Suffolk City	51800	13.0%	(6.0%, 25.7%)	12.2%	(10.8%, 13.7%)
Virginia Beach City	51810	11.5%	(8.1%, 16.1%)	13.4%	(12.1%, 14.7%)
Williamsburg City	51830	0.0%	(0.0%, 55.7%)	18.3%	(6.7%, 41.2%)

Section 4: Graphical representation

Lifetime asthma
Cumberland Plateau and Lenowisco HDs
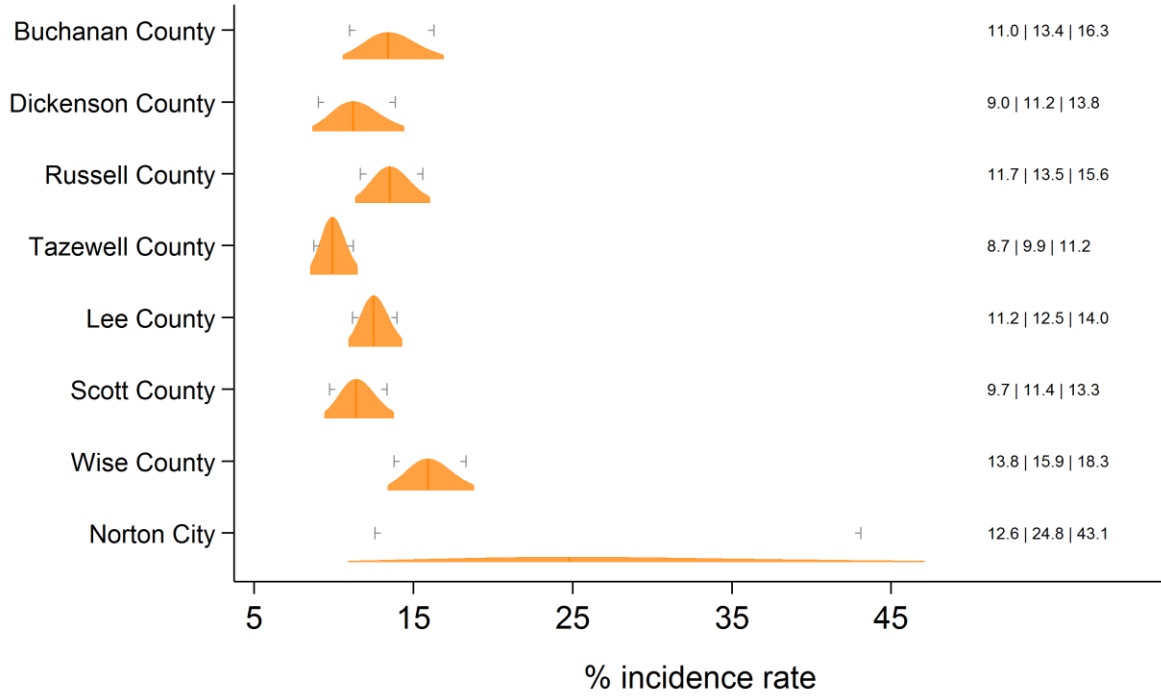
County	Values
Buchanan County	11.0	13.4	16.3
Dickenson County	9.0	11.2	13.8
Russell County	11.7	13.5	15.6
Tazewell County	8.7	9.9	11.2
Lee County	11.2	12.5	14.0
Scott County	9.7	11.4	13.3
Wise County	13.8	15.9	18.3
Norton City	12.6	24.8	43.1

% incidence rate

Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval

Lifetime asthma
Pittsylvania/Danville, Southside and West Piedmont HDs

County	1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Pittsylvania County	14.3 | 16.6 | 19.2
Danville City	11.7 | 14.2 | 17.1
Franklin County	11.6 | 14.4 | 17.8
Henry County	12.1 | 13.9 | 16.0
Patrick County	7.4 | 8.8 | 10.4
Martinsville City	7.8 | 9.5 | 11.5
Brunswick County	11.9 | 15.2 | 19.2
Halifax County	13.2 | 16.1 | 19.5
Mecklenburg County	13.2 | 15.7 | 18.5

% incidence rate

Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval

Lifetime asthma
Chesterfield, Chickahominy, Henrico and Richmond HDs
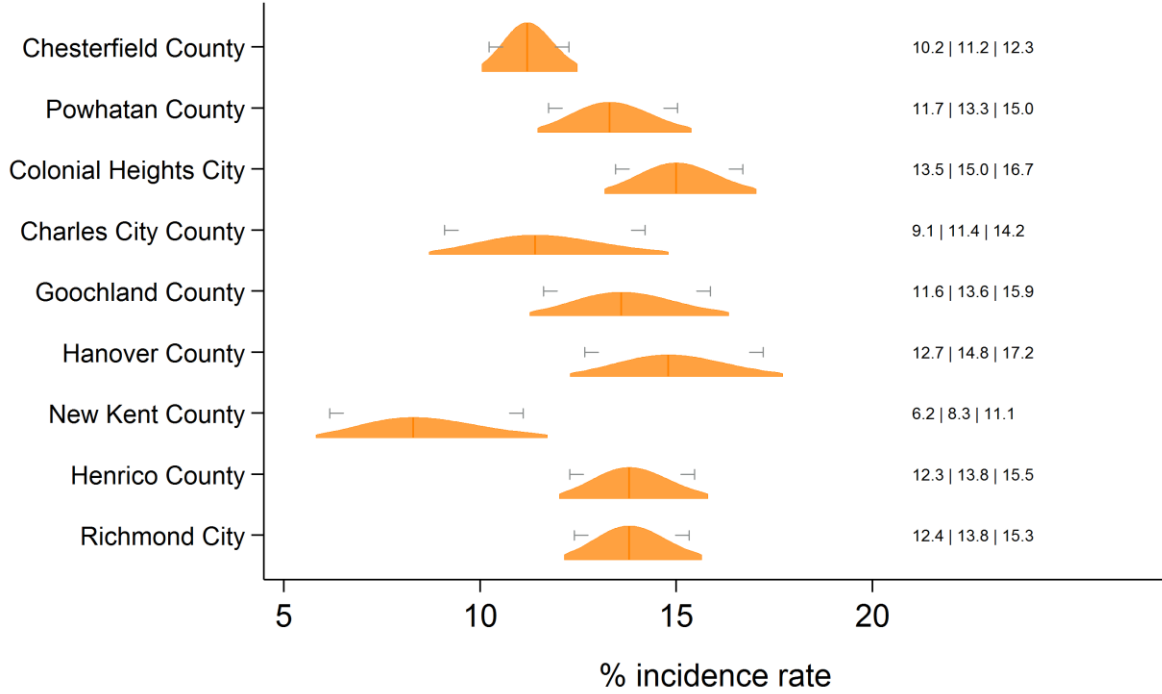
County/City	1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Chesterfield County	10.2 | 11.2 | 12.3
Powhatan County	11.7 | 13.3 | 15.0
Colonial Heights City	13.5 | 15.0 | 16.7
Charles City County	9.1 | 11.4 | 14.2
Goochland County	11.6 | 13.6 | 15.9
Hanover County	12.7 | 14.8 | 17.2
New Kent County	6.2 | 8.3 | 11.1
Henrico County	12.3 | 13.8 | 15.5
Richmond City	12.4 | 13.8 | 15.3

% incidence rate

Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval

Lifetime asthma
Norfolk,Portsmouth,Chesapeake,VA Beach,W. Tidewater HDs

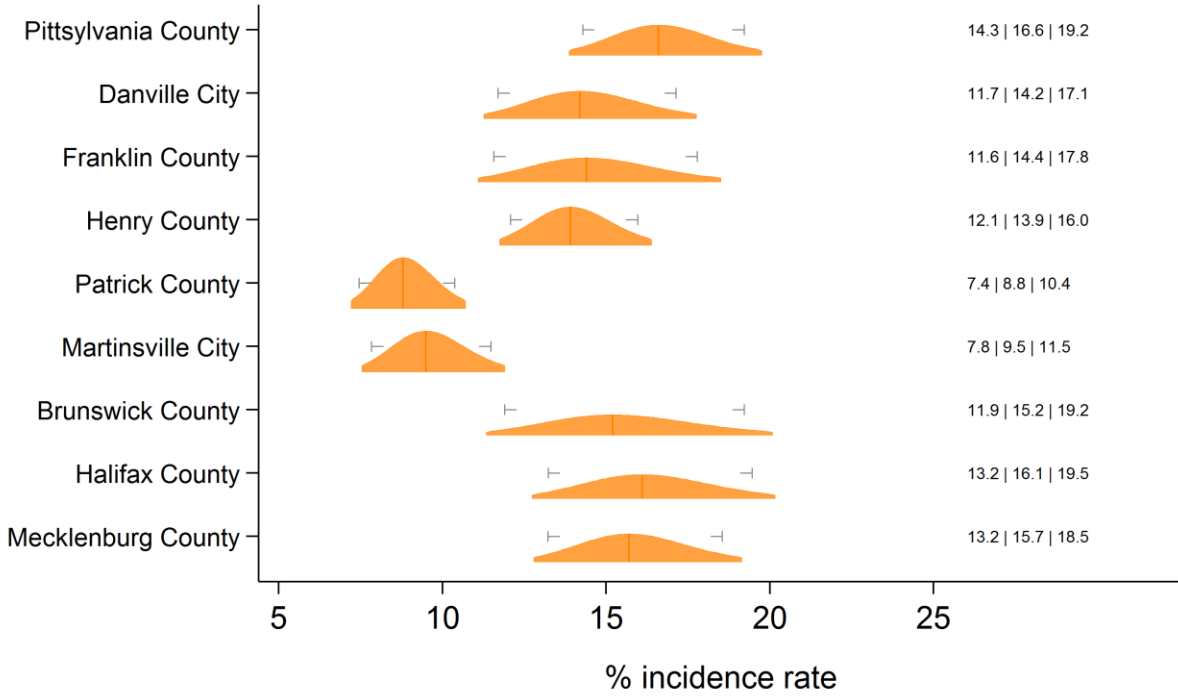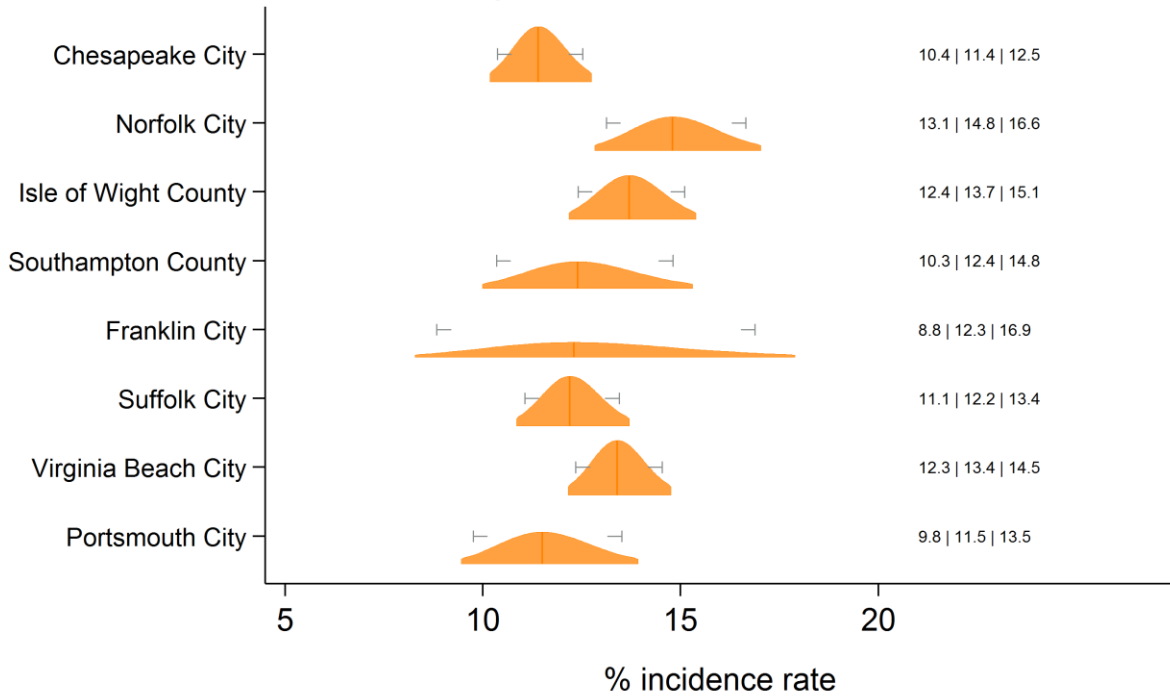| Location	LCB | Point | UCB
Chesapeake City	10.4 | 11.4 | 12.5
Norfolk City	13.1 | 14.8 | 16.6
Isle of Wight County	12.4 | 13.7 | 15.1
Southampton County	10.3 | 12.4 | 14.8
Franklin City	8.8 | 12.3 | 16.9
Suffolk City	11.1 | 12.2 | 13.4
Virginia Beach City	12.3 | 13.4 | 14.5
Portsmouth City	9.8 | 11.5 | 13.5

% incidence rate

Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval

Lifetime asthma
Alleghany, Roanoke and Central Virginia HDs
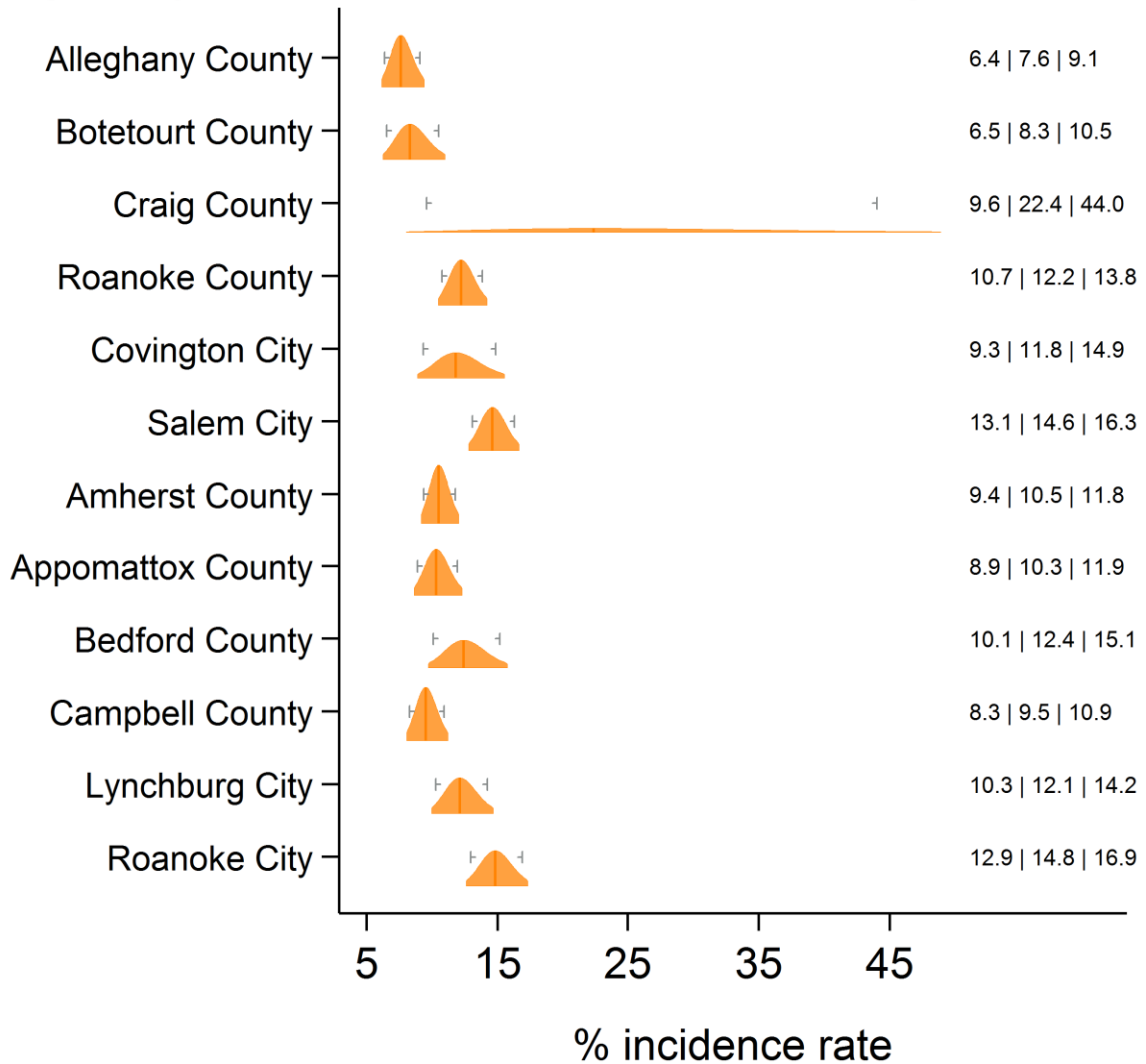
County/City	LCB | Point | UCB
Alleghany County	6.4 | 7.6 | 9.1
Botetourt County	6.5 | 8.3 | 10.5
Craig County	9.6 | 22.4 | 44.0
Roanoke County	10.7 | 12.2 | 13.8
Covington City	9.3 | 11.8 | 14.9
Salem City	13.1 | 14.6 | 16.3
Amherst County	9.4 | 10.5 | 11.8
Appomattox County	8.9 | 10.3 | 11.9
Bedford County	10.1 | 12.4 | 15.1
Campbell County	8.3 | 9.5 | 10.9
Lynchburg City	10.3 | 12.1 | 14.2
Roanoke City	12.9 | 14.8 | 16.9

% incidence rate

Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval

Lifetime asthma
Central Shenandoah and Lord Fairfax HDs

County/City		1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Augusta County		8.5 | 9.8 | 11.3
Bath County		3.9 | 6.4 | 10.4
Highland County		3.4 | 5.2 | 7.9
Rockbridge County		10.6 | 12.7 | 15.2
Rockingham County		7.9 | 9.1 | 10.5
Buena Vista City		6.3 | 11.1 | 18.8
Harrisonburg City		10.5 | 12.0 | 13.6
Lexington City		33.4 | 61.4 | 83.4
Staunton City		10.0 | 11.8 | 13.9
Waynesboro City		10.0 | 15.3 | 22.7
Clarke County		11.3 | 14.4 | 18.2
Frederick County		10.5 | 12.3 | 14.4
Page County		11.0 | 13.0 | 15.4
Shenandoah County		12.1 | 13.6 | 15.3
Warren County		11.2 | 13.2 | 15.5
Winchester City		8.1 | 10.1 | 12.6

% incidence rate

Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval

Lifetime asthma
Rappahannock/Rapidan and Rappahannock HDs
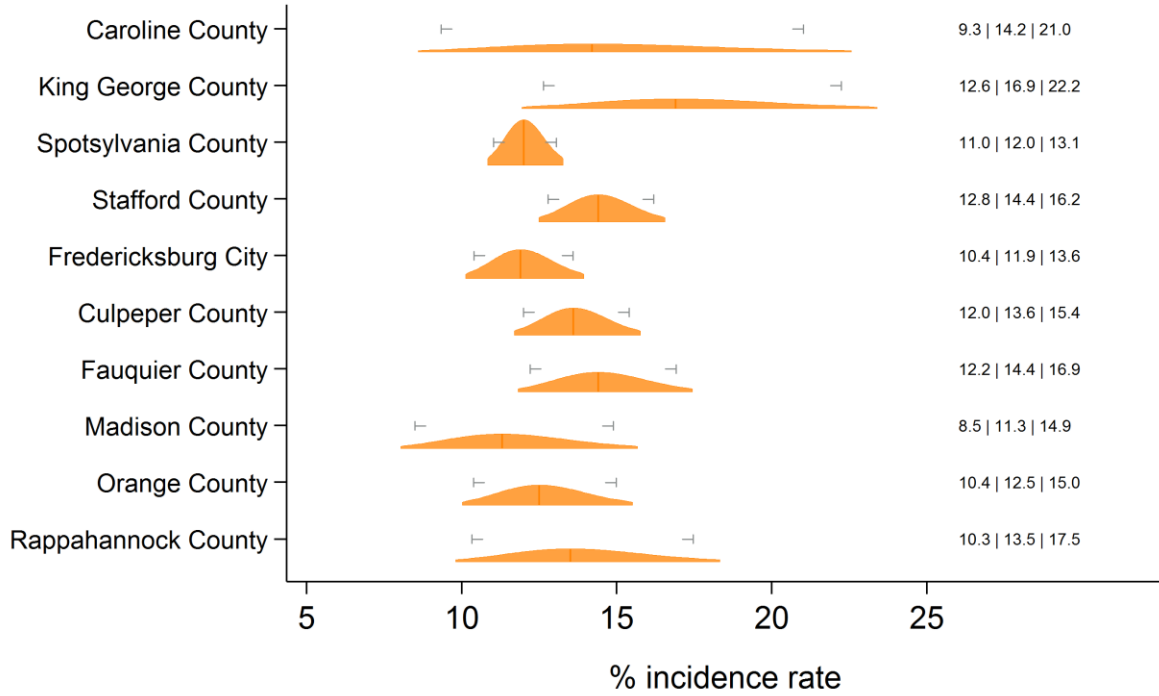
County	1-sided 95% LCB	Point Estimate	1-sided 95% UCB
Caroline County	9.3	14.2	21.0
King George County	12.6	16.9	22.2
Spotsylvania County	11.0	12.0	13.1
Stafford County	12.8	14.4	16.2
Fredericksburg City	10.4	11.9	13.6
Culpeper County	12.0	13.6	15.4
Fauquier County	12.2	14.4	16.9
Madison County	8.5	11.3	14.9
Orange County	10.4	12.5	15.0
Rappahannock County	10.3	13.5	17.5

% incidence rate

Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval

Lifetime asthma
Thomas Jefferson and Piedmont HDs
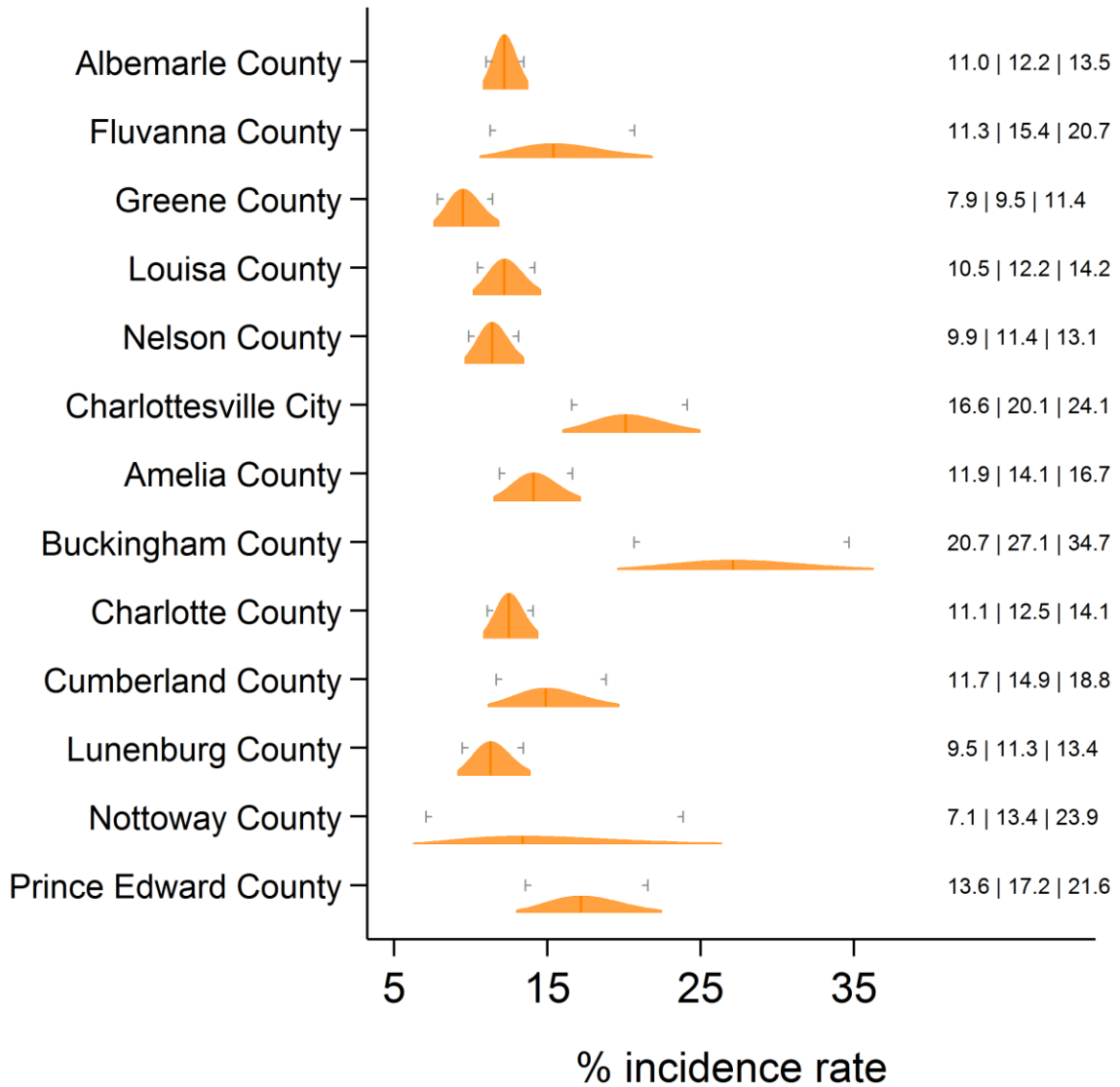
County	LCB	Point	UCB
Albemarle County	11.0	12.2	13.5
Fluvanna County	11.3	15.4	20.7
Greene County	7.9	9.5	11.4
Louisa County	10.5	12.2	14.2
Nelson County	9.9	11.4	13.1
Charlottesville City	16.6	20.1	24.1
Amelia County	11.9	14.1	16.7
Buckingham County	20.7	27.1	34.7
Charlotte County	11.1	12.5	14.1
Cumberland County	11.7	14.9	18.8
Lunenburg County	9.5	11.3	13.4
Nottoway County	7.1	13.4	23.9
Prince Edward County	13.6	17.2	21.6

% incidence rate

Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval

Lifetime asthma
Alexandria, Fairfax, Arlington, Loudon, Prince William HDs
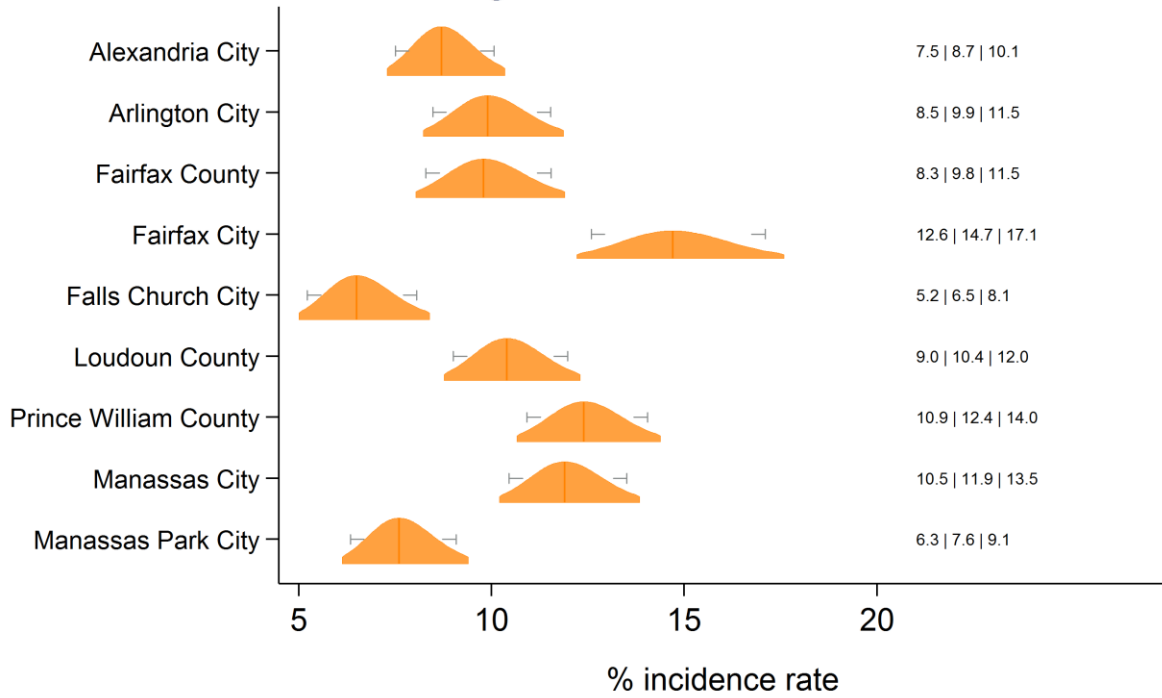
Location	1-sided 95% LCB	Point Estimate	1-sided 95% UCB
Alexandria City	7.5	8.7	10.1
Arlington City	8.5	9.9	11.5
Fairfax County	8.3	9.8	11.5
Fairfax City	12.6	14.7	17.1
Falls Church City	5.2	6.5	8.1
Loudoun County	9.0	10.4	12.0
Prince William County	10.9	12.4	14.0
Manassas City	10.5	11.9	13.5
Manassas Park City	6.3	7.6	9.1

% incidence rate

Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval

Lifetime asthma
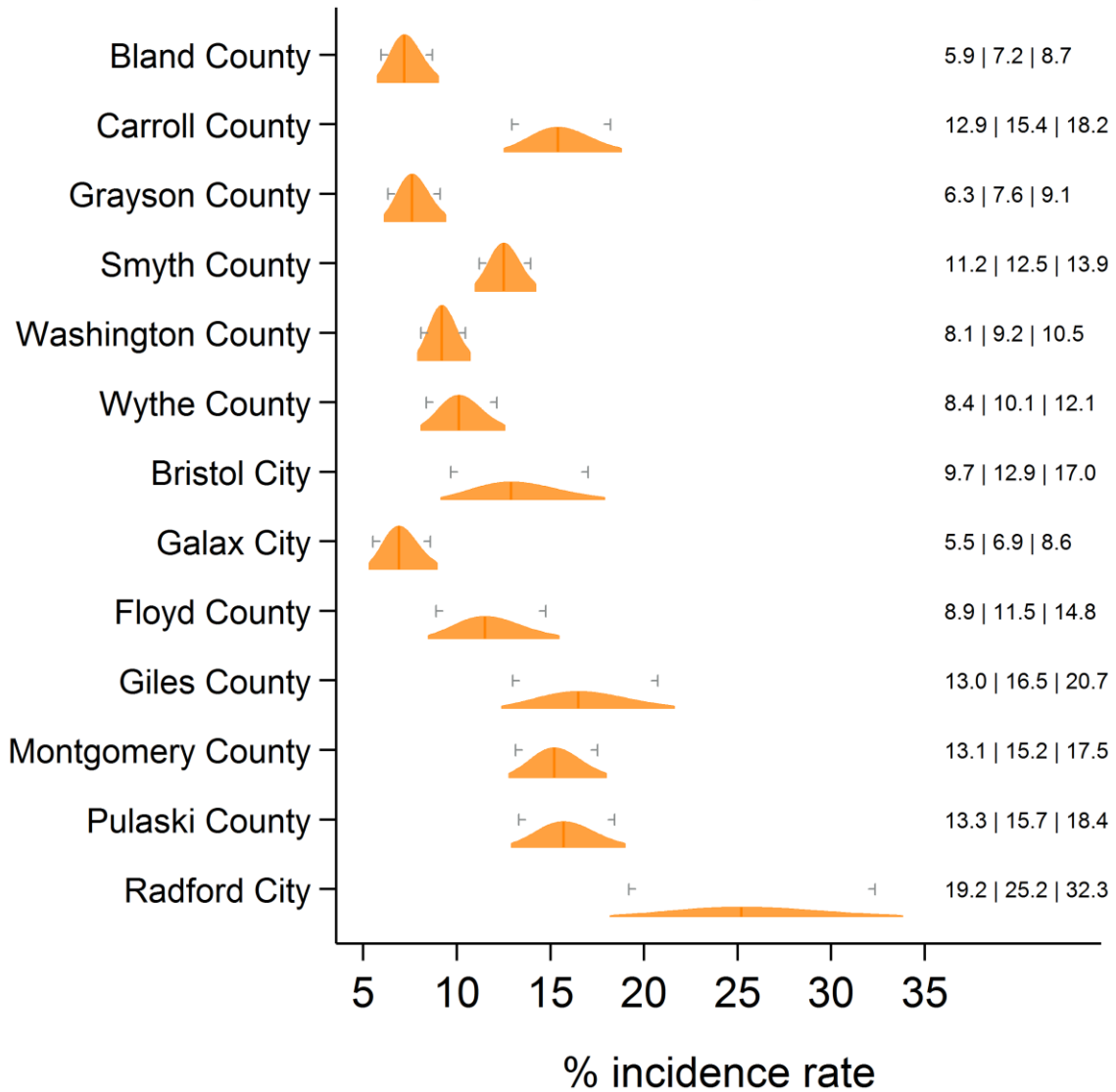## New River and Mount Rogers HDs

County	LCB | Point Estimate | UCB
Bland County	5.9 | 7.2 | 8.7
Carroll County	12.9 | 15.4 | 18.2
Grayson County	6.3 | 7.6 | 9.1
Smyth County	11.2 | 12.5 | 13.9
Washington County	8.1 | 9.2 | 10.5
Wythe County	8.4 | 10.1 | 12.1
Bristol City	9.7 | 12.9 | 17.0
Galax City	5.5 | 6.9 | 8.6
Floyd County	8.9 | 11.5 | 14.8
Giles County	13.0 | 16.5 | 20.7
Montgomery County	13.1 | 15.2 | 17.5
Pulaski County	13.3 | 15.7 | 18.4
Radford City	19.2 | 25.2 | 32.3

% incidence rate

Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval

Lifetime asthma
Crater, Peninsula and Hampton HDs
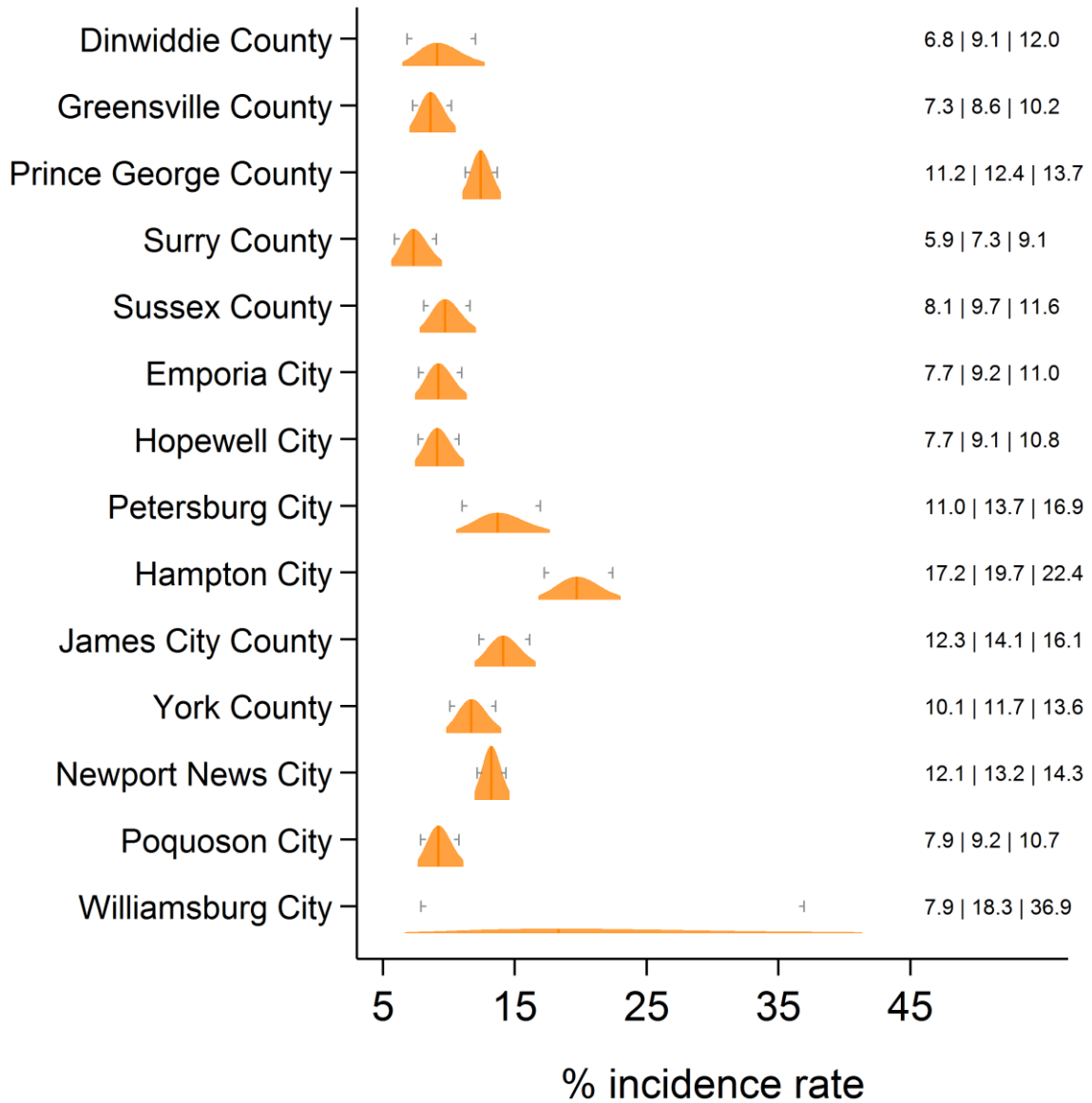
Dinwiddie County	6.8 | 9.1 | 12.0
Greensville County	7.3 | 8.6 | 10.2
Prince George County	11.2 | 12.4 | 13.7
Surry County	5.9 | 7.3 | 9.1
Sussex County	8.1 | 9.7 | 11.6
Emporia City	7.7 | 9.2 | 11.0
Hopewell City	7.7 | 9.1 | 10.8
Petersburg City	11.0 | 13.7 | 16.9
Hampton City	17.2 | 19.7 | 22.4
James City County	12.3 | 14.1 | 16.1
York County	10.1 | 11.7 | 13.6
Newport News City	12.1 | 13.2 | 14.3
Poquoson City	7.9 | 9.2 | 10.7
Williamsburg City	7.9 | 18.3 | 36.9

% incidence rate

Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval

Lifetime asthma
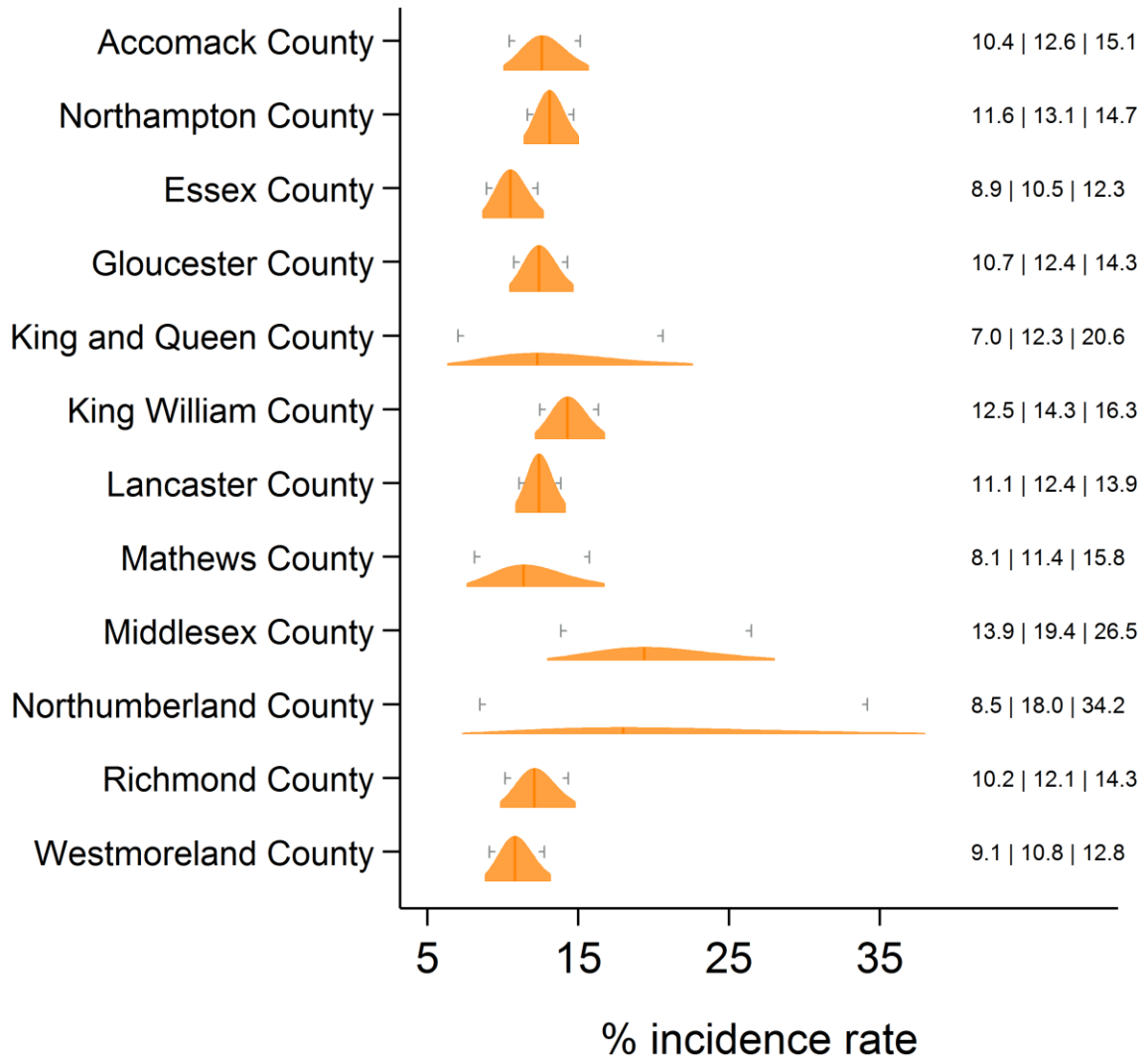## Eastern Shore and Three Rivers HDs

County	LCB | Point | UCB
Accomack County	10.4 | 12.6 | 15.1
Northampton County	11.6 | 13.1 | 14.7
Essex County	8.9 | 10.5 | 12.3
Gloucester County	10.7 | 12.4 | 14.3
King and Queen County	7.0 | 12.3 | 20.6
King William County	12.5 | 14.3 | 16.3
Lancaster County	11.1 | 12.4 | 13.9
Mathews County	8.1 | 11.4 | 15.8
Middlesex County	13.9 | 19.4 | 26.5
Northumberland County	8.5 | 18.0 | 34.2
Richmond County	10.2 | 12.1 | 14.3
Westmoreland County	9.1 | 10.8 | 12.8

% incidence rate

Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval

Section 5: Additional diagnostics

Direct estimate is inside the 95% SAE Wilson CI: 34 areas.

Direct estimate is outside the 95% SAE Wilson CI: 99 areas.

SAE estimate is inside the 95% direct Wilson CI: 124 areas.

SAE estimate is outside the 95% direct Wilson CI: 9 areas.

SAE Wilson 95% CI is fully inside the 95% direct Wilson CI: 117 areas.

SAE Wilson 95% CI partially overlaps with the 95% direct Wilson CI: 16 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: 118 areas.

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

Direct standard error is zero: 15 areas.

Proportion of SAE variance due to ACS sampling error: min = 0.08%; med = 2.71%; max = 11.32%.

Proportion of SAE variance to sampling error in regression coefficient estimates: min = 21.96%; med = 90.10%; max = 99.51%.

Proportion of SAE variance due to model selection: min = 0.27%; med = 5.78%; max = 77.77%.