Indicator 13: Ever had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia

Internal variable name: outc13_arthritis

Section 1: Definition

Definition: (Ever told) you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?

Section 2: Predictive models

	Mixed, demos only	Logit, no area effects	Mixed with area covariates
	b/se	b/se	b/se
Outcome 13: Ever had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia Non-Hispanic Black vs. Non-Hispanic White	-0.0211 (0.0971)	0.0077 (0.0895)	0.0078 (0.0958)
Non-Hispanic Asian vs. Non-Hispanic White	-0.3445 (0.2187)	-0.2327 (0.2435)	-0.2326 (0.2235)
Non-Hispanic Other vs. Non-Hispanic White	0.2124 (0.1335)	0.2364 (0.1725)	0.2364 (0.1360)
Hispanic vs. Non-Hispanic White	-0.7367*** (0.1874)	-0.6608** (0.2148)	-0.6608*** (0.1786)
Female	0.3728*** (0.0582)	0.3677*** (0.0651)	0.3677*** (0.0582)
Age 18-24 vs. 65+	-3.6002*** (0.3464)	-3.5830*** (0.2895)	-3.5827*** (0.3449)
Age 25-34 vs. 65+	-2.6753*** (0.1606)	-2.6533*** (0.1557)	-2.6532*** (0.1607)
Age 35-44 vs. 65+	-1.7826*** (0.1539)	-1.7561*** (0.1131)	-1.7561*** (0.1546)
Age 45-54 vs. 65+	-1.1164*** (0.0813)	-1.0854*** (0.0870)	-1.0854*** (0.0823)
Age 55-64 vs. 65+	-0.4624*** (0.0873)	-0.4551*** (0.0762)	-0.4551*** (0.0858)
Crude mortality rate of septicemia per 10,000		0.1836 (0.6238)	0.1837 (0.6631)
Crude mortality rate of chronic lower respiratory per 10,000		0.0488* (0.0203)	0.0488* (0.0220)

% HHs with children: non family		-0.1438**	-0.1438**
		(0.0466)	(0.0443)
% moved past year, population 1+ years old		-0.0070	-0.0070
		(0.0064)	(0.0062)
Historic SAE: mammogram screening		-0.0345***	-0.0345***
		(0.0089)	(0.0094)
Historic SAE: current smoking rate		0.0431*	0.0431
		(0.0219)	(0.0228)
{Historic SAE: current smoking rate} interacted with {Crude mortality rate of septicemia per 10,000}		-0.0015	-0.0015
		(0.0077)	(0.0082)
Testis Cancer Male Rate		-0.0193	-0.0193
		(0.0119)	(0.0128)
Crude mortality rate of nephritis nephrotic syndrome per 10,000		0.0811*	0.0811*
		(0.0382)	(0.0357)
{Testis Cancer Male Rate} interacted with {Crude mortality rate of nephritis nephrotic syndrome per 10,000}		0.0037	0.0037
		(0.0033)	(0.0034)
Intercept	0.0197	-1.3841	-1.3843
	(0.0768)	(1.7821)	(1.8066)
Area effect variance	0.0816*		0.0000
	(0.0403)		(0.0000)

Number of alternative models used to estimate model error = 5.

Section 3: Results

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Augusta County	51015	32.0%	(24.1%, 41.1%)	35.4%	(32.1%, 38.9%)
Bath County	51017	45.0%	(17.7%, 75.8%)	35.2%	(27.2%, 44.2%)
Caroline County	51033	35.6%	(18.6%, 57.2%)	27.6%	(24.6%, 30.8%)
Clarke County	51043	6.0%	(3.0%, 27.0%)	22.1%	(18.8%, 25.8%)
Culpeper County	51047	29.9%	(18.7%, 44.3%)	27.9%	(24.7%, 31.3%)
Fauquier County	51061	38.3%	(26.9%, 51.0%)	30.5%	(27.2%, 34.1%)
Frederick County	51069	18.7%	(12.6%, 26.9%)	24.9%	(22.5%, 27.4%)
Highland County	51091	27.8%	(2.1%, 87.2%)	15.7%	(9.9%, 23.9%)
King George County	51099	32.1%	(13.6%, 58.8%)	25.2%	(20.8%, 30.2%)
Madison County	51113	11.4%	(5.8%, 32.4%)	29.2%	(25.8%, 32.7%)
Orange County	51137	20.1%	(11.0%, 33.7%)	28.6%	(24.4%, 33.2%)
Page County	51139	27.5%	(10.2%, 55.8%)	28.9%	(24.2%, 34.1%)
Rappahannock County	51157	27.2%	(10.2%, 55.2%)	22.7%	(18.8%, 27.2%)
Rockbridge County	51163	43.5%	(25.3%, 63.6%)	41.8%	(37.8%, 45.8%)
Rockingham County	51165	24.2%	(16.1%, 34.7%)	25.8%	(23.4%, 28.4%)
Shenandoah County	51171	28.1%	(16.0%, 44.5%)	26.9%	(23.9%, 30.2%)
Spotsylvania County	51177	19.3%	(12.2%, 29.4%)	20.3%	(18.1%, 22.6%)
Stafford County	51179	19.9%	(13.5%, 28.3%)	20.5%	(18.6%, 22.6%)
Warren County	51187	19.3%	(10.8%, 36.3%)	31.3%	(28.2%, 34.6%)
Buena Vista City	51530	0.0%	(-0.0%, 89.6%)	32.7%	(27.5%, 38.5%)
Fredericksburg City	51630	30.5%	(13.5%, 55.3%)	19.6%	(15.6%, 24.4%)
Harrisonburg City	51660	5.2%	(2.4%, 38.6%)	17.2%	(13.6%, 21.4%)
Lexington City	51678	0.0%	(0.0%, 99.4%)	32.6%	(24.8%, 41.5%)
Staunton City	51790	23.6%	(5.1%, 64.0%)	31.5%	(29.1%, 34.0%)
Waynesboro City	51820	19.9%	(5.6%, 51.3%)	30.3%	(27.6%, 33.1%)
Winchester City	51840	22.1%	(8.9%, 45.1%)	23.2%	(19.0%, 28.1%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Albemarle County	51003	24.5%	(16.9%, 34.2%)	20.8%	(18.4%, 23.5%)
Alleghany County	51005	38.8%	(22.1%, 58.6%)	40.9%	(33.7%, 48.6%)
Amherst County	51009	33.9%	(18.5%, 53.8%)	32.8%	(30.3%, 35.4%)
Appomattox County	51011	14.9%	(6.9%, 35.6%)	25.5%	(19.0%, 33.1%)
Arlington City	51013	14.5%	(9.9%, 20.8%)	19.1%	(16.7%, 21.7%)
Bedford County	51019	26.7%	(18.0%, 37.7%)	28.3%	(24.7%, 32.2%)
Botetourt County	51023	35.9%	(23.6%, 50.5%)	32.7%	(29.7%, 35.9%)
Campbell County	51031	33.2%	(20.5%, 49.0%)	26.3%	(23.8%, 29.0%)
Craig County	51045	0.0%	(0.0%, 73.6%)	40.7%	(34.8%, 46.9%)
Fairfax County	51059	23.8%	(19.3%, 28.9%)	20.2%	(17.8%, 22.8%)
Fluvanna County	51065	37.9%	(18.0%, 62.9%)	24.0%	(20.5%, 27.9%)
Greene County	51079	16.9%	(7.1%, 41.1%)	25.3%	(21.4%, 29.7%)
Loudoun County	51107	16.4%	(12.0%, 22.0%)	20.6%	(17.3%, 24.4%)
Louisa County	51109	36.6%	(21.4%, 55.1%)	26.8%	(23.9%, 29.9%)
Nelson County	51125	16.8%	(6.0%, 39.0%)	29.9%	(25.5%, 34.7%)
Prince William County	51153	16.8%	(12.6%, 21.9%)	16.8%	(15.4%, 18.4%)
Roanoke County	51161	24.9%	(18.7%, 32.5%)	29.3%	(27.3%, 31.5%)
Alexandria City	51510	16.1%	(10.0%, 24.8%)	17.3%	(15.8%, 19.0%)
Charlottesville City	51540	11.8%	(4.0%, 37.7%)	16.5%	(12.5%, 21.5%)
Covington City	51580	0.0%	(0.0%, 99.4%)	50.9%	(36.9%, 64.8%)
Fairfax City	51600	15.4%	(9.5%, 23.9%)	18.7%	(16.2%, 21.5%)
Falls Church City	51610	2.5%	(0.8%, 63.4%)	21.7%	(18.3%, 25.6%)
Lynchburg City	51680	18.2%	(10.1%, 30.7%)	21.0%	(18.1%, 24.1%)
Manassas City	51683	26.4%	(8.7%, 57.4%)	20.3%	(18.1%, 22.6%)
Manassas Park City	51685	0.0%	(-0.0%, 96.8%)	13.6%	(10.0%, 18.1%)
Salem City	51775	28.3%	(8.5%, 62.5%)	25.5%	(22.0%, 29.4%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Bland County	51021	40.2%	(12.9%, 75.3%)	39.4%	(34.4%, 44.6%)
Buchanan County	51027	57.0%	(41.0%, 71.6%)	50.9%	(44.2%, 57.6%)
Carroll County	51035	38.9%	(24.3%, 55.7%)	40.7%	(36.0%, 45.5%)
Dickenson County	51051	53.0%	(34.5%, 70.7%)	49.3%	(41.3%, 57.2%)
Floyd County	51063	29.1%	(15.1%, 48.7%)	19.8%	(14.2%, 26.8%)
Franklin County	51067	36.2%	(20.6%, 55.3%)	33.6%	(30.9%, 36.4%)
Giles County	51071	43.7%	(23.0%, 67.0%)	32.8%	(27.4%, 38.7%)
Grayson County	51077	27.2%	(12.3%, 49.9%)	28.9%	(21.2%, 37.9%)
Henry County	51089	48.4%	(35.9%, 61.2%)	36.8%	(34.0%, 39.6%)
Lee County	51105	29.4%	(16.6%, 46.6%)	45.0%	(40.2%, 49.8%)
Montgomery County	51121	19.9%	(13.1%, 29.1%)	23.2%	(19.9%, 26.7%)
Patrick County	51141	29.3%	(15.8%, 47.8%)	33.4%	(28.8%, 38.3%)
Pittsylvania County	51143	34.6%	(26.1%, 44.1%)	35.5%	(32.8%, 38.4%)
Pulaski County	51155	43.2%	(28.9%, 58.8%)	28.3%	(25.0%, 31.9%)
Russell County	51167	46.8%	(29.9%, 64.5%)	43.0%	(36.7%, 49.6%)
Scott County	51169	47.8%	(33.8%, 62.1%)	42.0%	(38.2%, 45.9%)
Smyth County	51173	32.6%	(19.4%, 49.3%)	39.2%	(35.3%, 43.2%)
Tazewell County	51185	47.9%	(34.8%, 61.3%)	40.8%	(36.4%, 45.4%)
Washington County	51191	40.3%	(27.9%, 54.1%)	36.3%	(32.2%, 40.7%)
Wise County	51195	56.9%	(43.8%, 69.1%)	45.0%	(37.7%, 52.6%)
Wythe County	51197	50.4%	(35.4%, 65.3%)	42.7%	(38.6%, 46.9%)
Bristol City	51520	26.7%	(7.8%, 64.4%)	35.7%	(30.3%, 41.4%)
Danville City	51590	23.7%	(10.6%, 44.8%)	30.1%	(25.3%, 35.3%)
Galax City	51640	35.6%	(5.2%, 86.4%)	43.7%	(35.2%, 52.5%)
Martinsville City	51690	0.0%	(0.0%, 53.9%)	34.4%	(20.7%, 51.3%)
Norton City	51720	48.4%	(7.9%, 91.2%)	36.4%	(30.8%, 42.5%)
Radford City	51750	0.0%	(0.0%, 56.8%)	14.0%	(9.1%, 21.0%)
Roanoke City	51770	27.9%	(20.0%, 37.4%)	25.6%	(23.3%, 28.1%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Amelia County	51007	15.5%	(8.2%, 38.9%)	29.3%	(24.7%, 34.4%)
Brunswick County	51025	42.9%	(22.1%, 66.7%)	34.9%	(30.9%, 39.2%)
Buckingham County	51029	34.7%	(17.8%, 56.6%)	29.5%	(24.8%, 34.6%)
Charles City County	51036	80.3%	(31.7%, 97.3%)	29.5%	(26.1%, 33.0%)
Charlotte County	51037	40.5%	(16.3%, 70.5%)	33.0%	(27.5%, 39.1%)
Chesterfield County	51041	26.7%	(21.4%, 32.9%)	25.0%	(23.0%, 27.1%)
Cumberland County	51049	38.4%	(16.7%, 66.1%)	38.5%	(33.9%, 43.3%)
Dinwiddie County	51053	20.7%	(11.4%, 34.7%)	30.0%	(26.0%, 34.4%)
Goochland County	51075	30.1%	(14.8%, 51.6%)	30.4%	(27.0%, 34.1%)
Greensville County	51081	28.1%	(9.1%, 60.4%)	41.0%	(34.0%, 48.4%)
Halifax County	51083	29.7%	(19.4%, 42.7%)	32.4%	(28.2%, 37.0%)
Hanover County	51085	24.5%	(17.3%, 33.4%)	26.6%	(24.5%, 28.8%)
Henrico County	51087	22.7%	(18.2%, 27.9%)	25.1%	(23.5%, 26.7%)
Lunenburg County	51111	56.5%	(28.0%, 81.3%)	33.2%	(27.8%, 39.1%)
Mecklenburg County	51117	44.5%	(29.1%, 60.9%)	35.0%	(31.2%, 38.9%)
New Kent County	51127	32.4%	(15.0%, 56.5%)	26.7%	(23.7%, 29.9%)
Nottoway County	51135	14.6%	(7.6%, 36.9%)	18.4%	(12.9%, 25.6%)
Powhatan County	51145	46.7%	(18.7%, 76.9%)	26.2%	(22.3%, 30.5%)
Prince Edward County	51147	26.5%	(13.4%, 45.6%)	35.2%	(31.4%, 39.2%)
Prince George County	51149	24.4%	(13.7%, 39.8%)	29.4%	(25.9%, 33.1%)
Surry County	51181	50.4%	(15.6%, 84.9%)	23.5%	(18.7%, 29.2%)
Sussex County	51183	49.7%	(24.4%, 75.1%)	37.4%	(32.6%, 42.4%)
Colonial Heights City	51570	21.6%	(6.7%, 59.0%)	33.4%	(26.8%, 40.8%)
Emporia City	51595	40.9%	(6.4%, 87.5%)	41.1%	(29.1%, 54.3%)
Hopewell City	51670	25.6%	(11.5%, 47.7%)	31.8%	(27.2%, 36.8%)
Petersburg City	51730	19.1%	(10.6%, 32.0%)	34.2%	(29.2%, 39.6%)
Richmond City	51760	19.2%	(13.6%, 26.4%)	20.9%	(19.1%, 22.8%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Accomack County	51001	26.4%	(16.3%, 39.6%)	40.6%	(30.7%, 51.3%)
Essex County	51057	26.5%	(10.9%, 51.6%)	36.5%	(31.8%, 41.3%)
Gloucester County	51073	19.2%	(10.1%, 33.6%)	33.5%	(31.3%, 35.8%)
Isle of Wight County	51093	49.1%	(33.8%, 64.7%)	35.5%	(32.3%, 38.8%)
James City County	51095	26.3%	(16.5%, 39.3%)	22.3%	(19.7%, 25.2%)
King and Queen County	51097	39.2%	(8.5%, 81.7%)	31.9%	(27.0%, 37.2%)
King William County	51101	39.9%	(19.5%, 64.5%)	39.0%	(33.7%, 44.7%)
Lancaster County	51103	58.6%	(32.5%, 80.6%)	38.2%	(30.3%, 46.8%)
Mathews County	51115	22.6%	(9.6%, 44.6%)	23.8%	(14.9%, 35.9%)
Middlesex County	51119	59.3%	(20.8%, 89.0%)	36.3%	(23.6%, 51.3%)
Northampton County	51131	40.4%	(23.1%, 60.5%)	37.4%	(27.4%, 48.5%)
Northumberland County	51133	60.6%	(35.2%, 81.3%)	32.8%	(23.9%, 43.2%)
Richmond County	51159	29.8%	(16.7%, 47.4%)	32.3%	(28.4%, 36.5%)
Southampton County	51175	44.3%	(19.7%, 71.9%)	32.0%	(28.8%, 35.4%)
Westmoreland County	51193	28.5%	(12.8%, 52.1%)	35.2%	(29.2%, 41.6%)
York County	51199	24.3%	(15.2%, 36.6%)	25.0%	(22.9%, 27.3%)
Chesapeake City	51550	27.7%	(21.7%, 34.5%)	22.9%	(21.3%, 24.5%)
Franklin City	51620	27.9%	(15.6%, 44.9%)	29.7%	(26.4%, 33.3%)
Hampton City	51650	24.9%	(18.5%, 32.6%)	23.0%	(21.3%, 24.8%)
Newport News City	51700	23.7%	(16.8%, 32.5%)	21.8%	(19.7%, 24.0%)
Norfolk City	51710	27.0%	(20.5%, 34.7%)	23.7%	(21.1%, 26.6%)
Poquoson City	51735	41.5%	(9.9%, 82.1%)	36.7%	(31.1%, 42.8%)
Portsmouth City	51740	34.9%	(24.9%, 46.4%)	30.2%	(27.6%, 33.0%)
Suffolk City	51800	34.9%	(24.7%, 46.7%)	25.7%	(23.4%, 28.2%)
Virginia Beach City	51810	24.2%	(19.3%, 29.9%)	21.3%	(19.9%, 22.9%)
Williamsburg City	51830	40.4%	(9.3%, 81.8%)	17.1%	(9.6%, 28.6%)

Section 4: Graphical representation

Lifetime arthritis, gout, lupus, fibromyalgia
Thomas Jefferson and Piedmont HDs
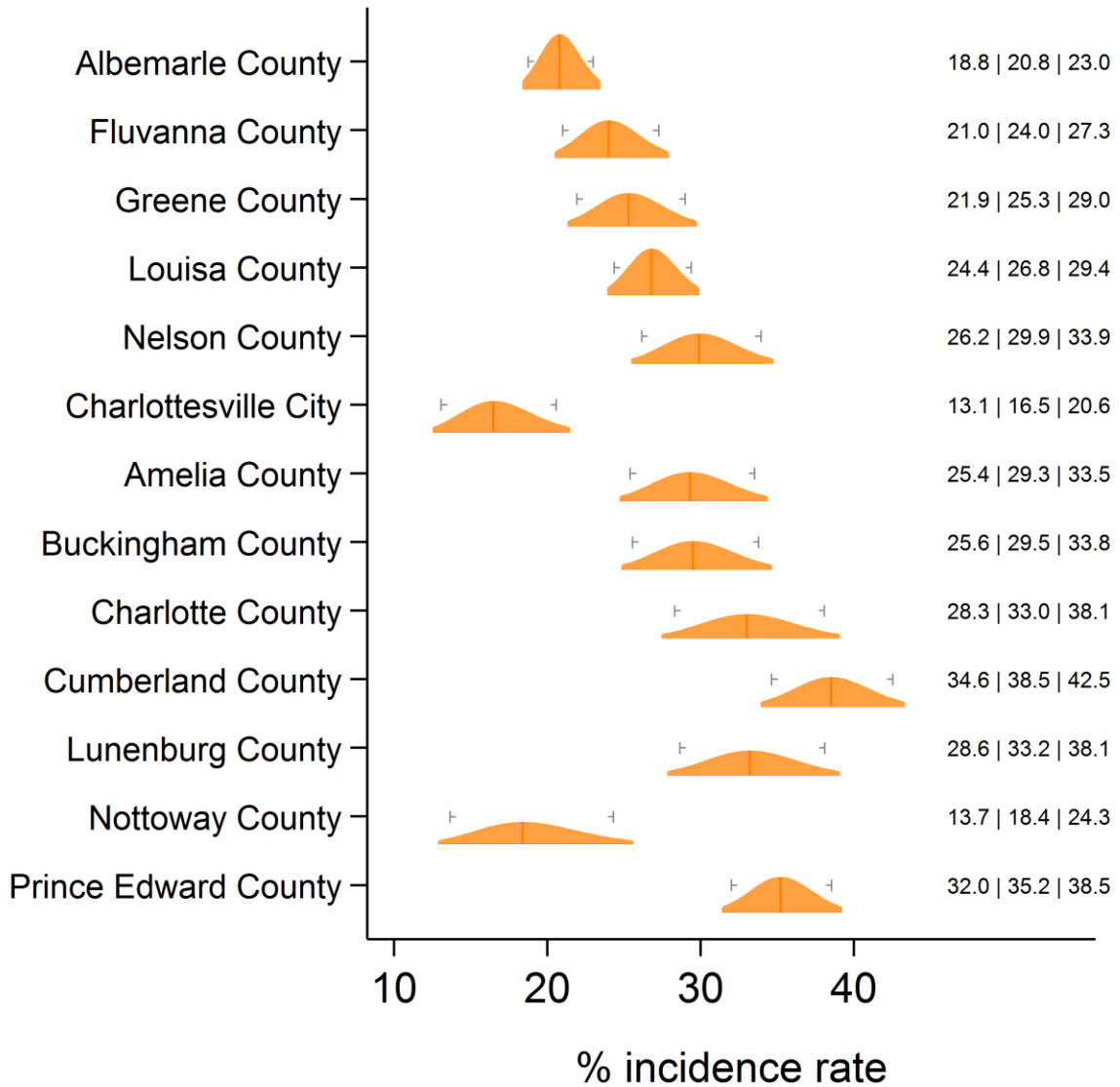
County	LCB | Point | UCB
Albemarle County	18.8 | 20.8 | 23.0
Fluvanna County	21.0 | 24.0 | 27.3
Greene County	21.9 | 25.3 | 29.0
Louisa County	24.4 | 26.8 | 29.4
Nelson County	26.2 | 29.9 | 33.9
Charlottesville City	13.1 | 16.5 | 20.6
Amelia County	25.4 | 29.3 | 33.5
Buckingham County	25.6 | 29.5 | 33.8
Charlotte County	28.3 | 33.0 | 38.1
Cumberland County	34.6 | 38.5 | 42.5
Lunenburg County	28.6 | 33.2 | 38.1
Nottoway County	13.7 | 18.4 | 24.3
Prince Edward County	32.0 | 35.2 | 38.5

% incidence rate

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

Lifetime arthritis, gout, lupus, fibromyalgia
Alexandria, Fairfax, Arlington, Loudon, Prince William HDs

Alexandria City	16.0 | 17.3 | 18.7
Arlington City	17.1 | 19.1 | 21.3
Fairfax County	18.2 | 20.2 | 22.4
Fairfax City	16.6 | 18.7 | 21.0
Falls Church City	18.8 | 21.7 | 24.9
Loudoun County	17.8 | 20.6 | 23.7
Prince William County	15.6 | 16.8 | 18.1
Manassas City	18.5 | 20.3 | 22.2
Manassas Park City	10.6 | 13.6 | 17.4

% incidence rate

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

Lifetime arthritis, gout, lupus, fibromyalgia
New River and Mount Rogers HDs
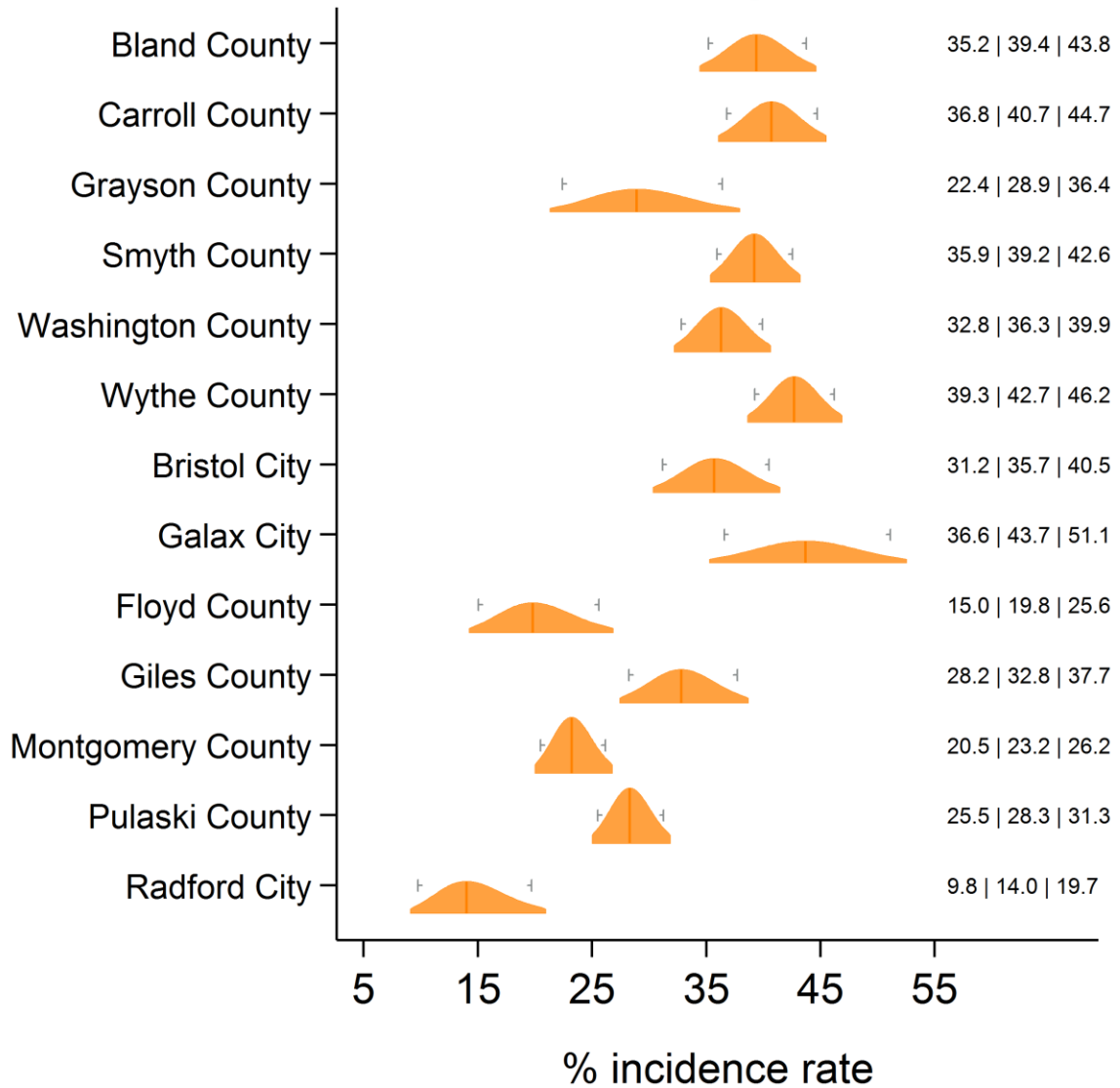
County	LCB | Point | UCB
Bland County	35.2 | 39.4 | 43.8
Carroll County	36.8 | 40.7 | 44.7
Grayson County	22.4 | 28.9 | 36.4
Smyth County	35.9 | 39.2 | 42.6
Washington County	32.8 | 36.3 | 39.9
Wythe County	39.3 | 42.7 | 46.2
Bristol City	31.2 | 35.7 | 40.5
Galax City	36.6 | 43.7 | 51.1
Floyd County	15.0 | 19.8 | 25.6
Giles County	28.2 | 32.8 | 37.7
Montgomery County	20.5 | 23.2 | 26.2
Pulaski County	25.5 | 28.3 | 31.3
Radford City	9.8 | 14.0 | 19.7

% incidence rate

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

Lifetime arthritis, gout, lupus, fibromyalgia
Norfolk,Portsmouth,Chesapeake,VA Beach,W. Tidewater HDs
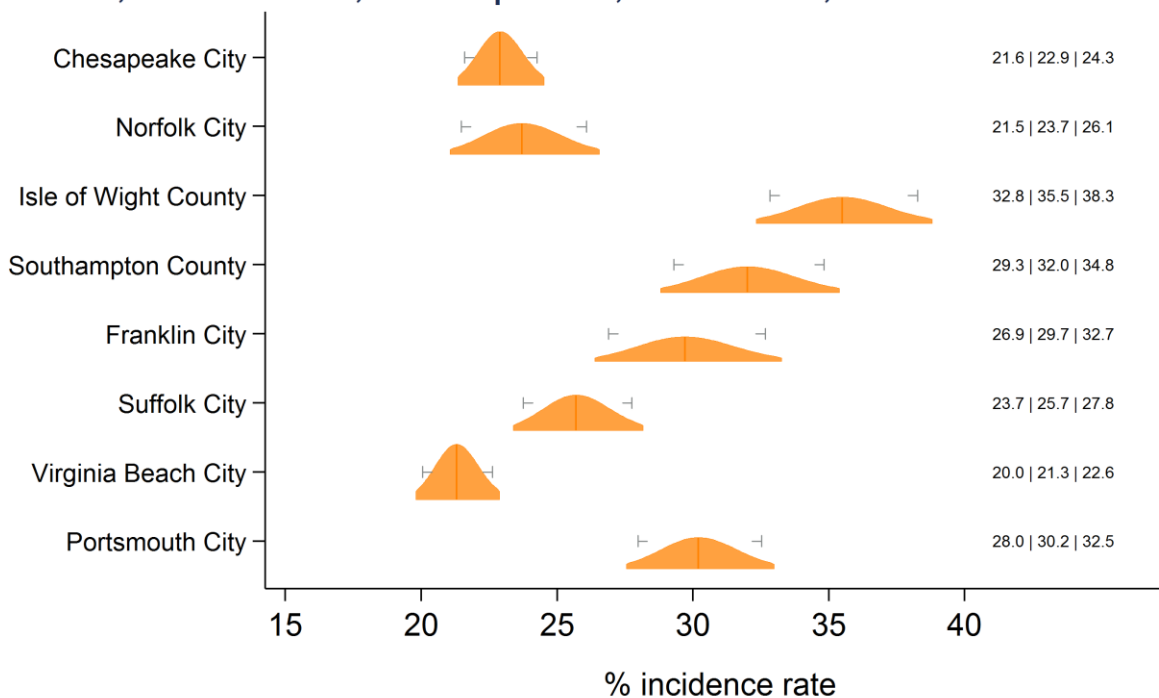
Location	LCB | Point | UCB
Chesapeake City	21.6 | 22.9 | 24.3
Norfolk City	21.5 | 23.7 | 26.1
Isle of Wight County	32.8 | 35.5 | 38.3
Southampton County	29.3 | 32.0 | 34.8
Franklin City	26.9 | 29.7 | 32.7
Suffolk City	23.7 | 25.7 | 27.8
Virginia Beach City	20.0 | 21.3 | 22.6
Portsmouth City	28.0 | 30.2 | 32.5

% incidence rate

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

Lifetime arthritis, gout, lupus, fibromyalgia Central Shenandoah and Lord Fairfax HDs
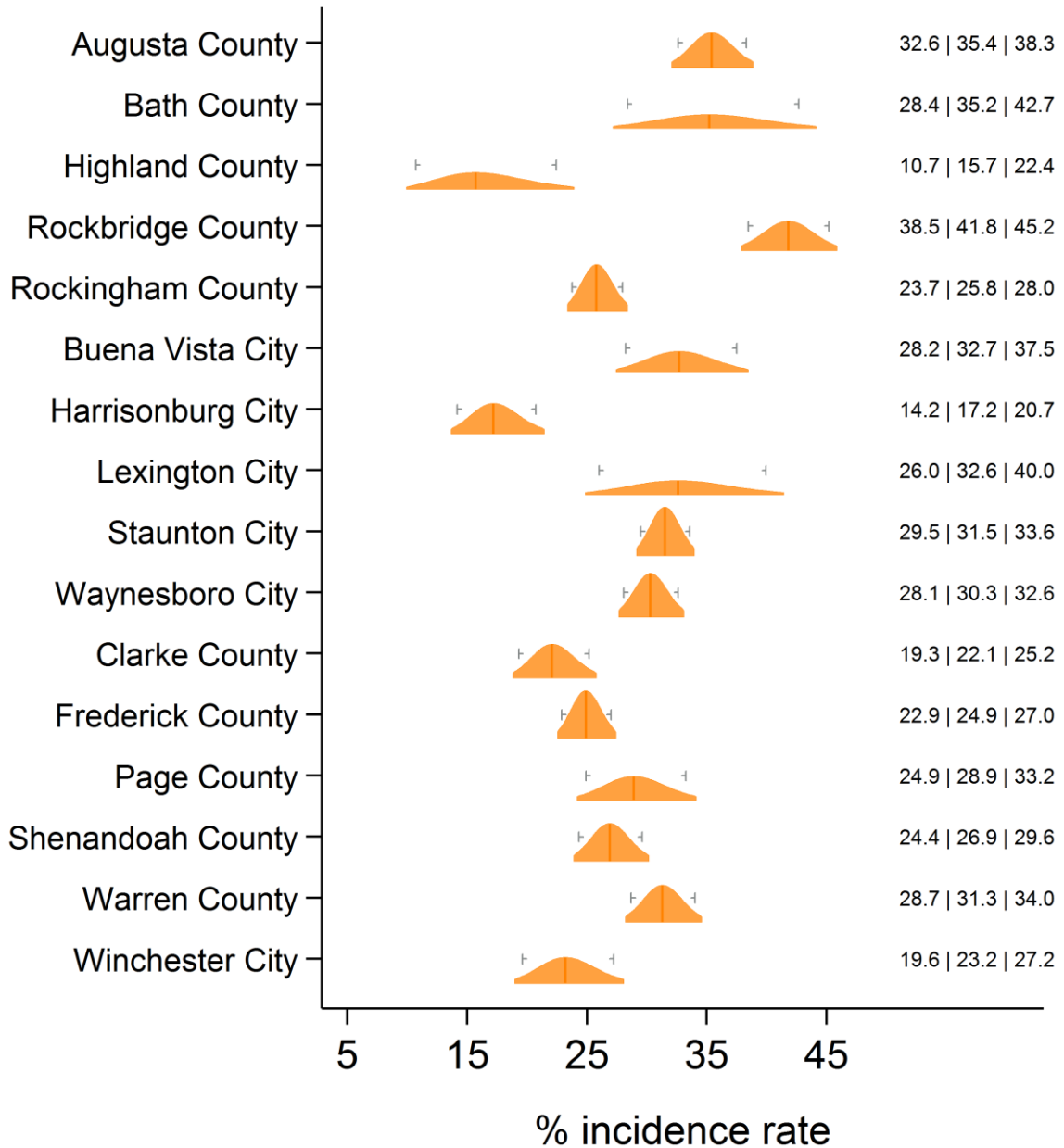
County/City	LCB	Point	UCB
Augusta County	32.6	35.4	38.3
Bath County	28.4	35.2	42.7
Highland County	10.7	15.7	22.4
Rockbridge County	38.5	41.8	45.2
Rockingham County	23.7	25.8	28.0
Buena Vista City	28.2	32.7	37.5
Harrisonburg City	14.2	17.2	20.7
Lexington City	26.0	32.6	40.0
Staunton City	29.5	31.5	33.6
Waynesboro City	28.1	30.3	32.6
Clarke County	19.3	22.1	25.2
Frederick County	22.9	24.9	27.0
Page County	24.9	28.9	33.2
Shenandoah County	24.4	26.9	29.6
Warren County	28.7	31.3	34.0
Winchester City	19.6	23.2	27.2

% incidence rate

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

Lifetime arthritis, gout, lupus, fibromyalgia
Alleghany, Roanoke and Central Virginia HDs
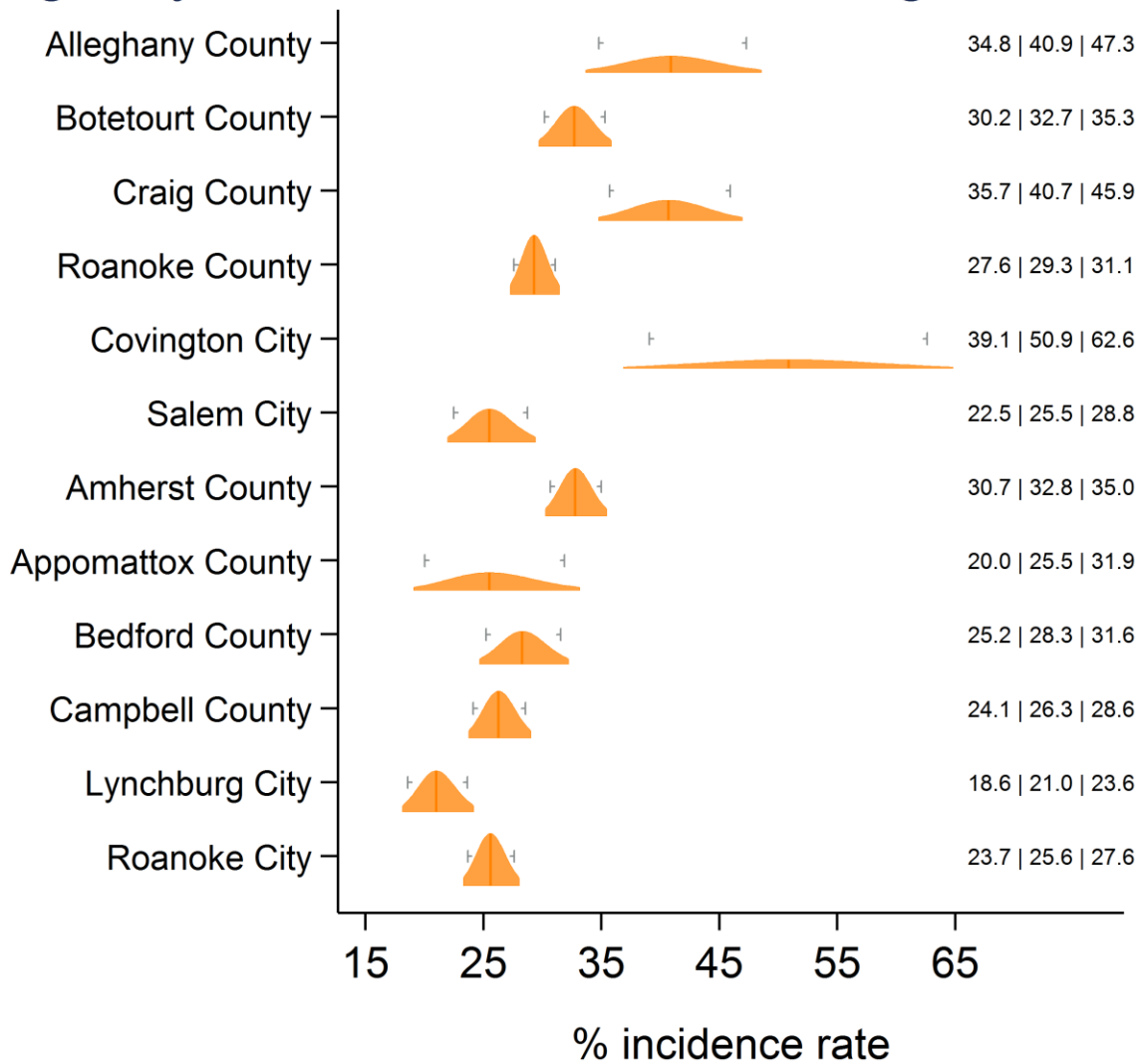
County/City	LCB	Point	UCB
Alleghany County	34.8	40.9	47.3
Botetourt County	30.2	32.7	35.3
Craig County	35.7	40.7	45.9
Roanoke County	27.6	29.3	31.1
Covington City	39.1	50.9	62.6
Salem City	22.5	25.5	28.8
Amherst County	30.7	32.8	35.0
Appomattox County	20.0	25.5	31.9
Bedford County	25.2	28.3	31.6
Campbell County	24.1	26.3	28.6
Lynchburg City	18.6	21.0	23.6
Roanoke City	23.7	25.6	27.6

% incidence rate

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

Lifetime arthritis, gout, lupus, fibromyalgia
Cumberland Plateau and Lenowisco HDs

County	1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Buchanan County	45.3 | 50.9 | 56.5
Dickenson County	42.6 | 49.3 | 56.0
Russell County	37.7 | 43.0 | 48.5
Tazewell County	37.1 | 40.8 | 44.6
Lee County	41.0 | 45.0 | 49.1
Scott County	38.8 | 42.0 | 45.3
Wise County	38.8 | 45.0 | 51.4
Norton City	31.6 | 36.4 | 41.4

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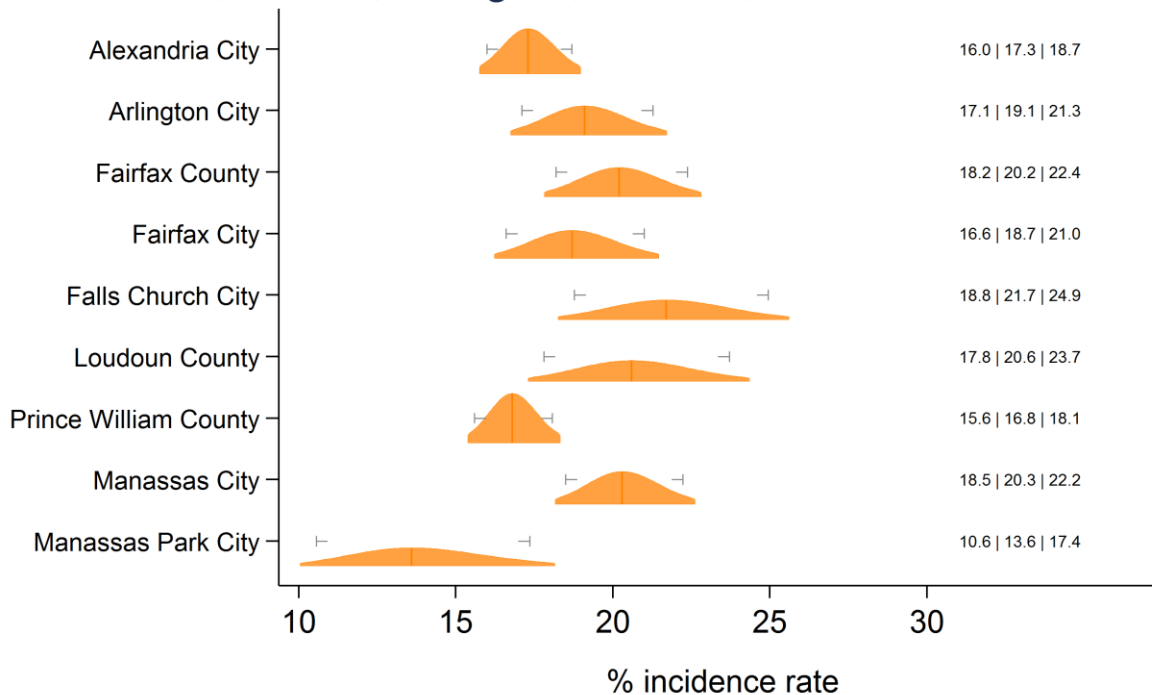
Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval

Lifetime arthritis, gout, lupus, fibromyalgia
Pittsylvania/Danville, Southside and West Piedmont HDs
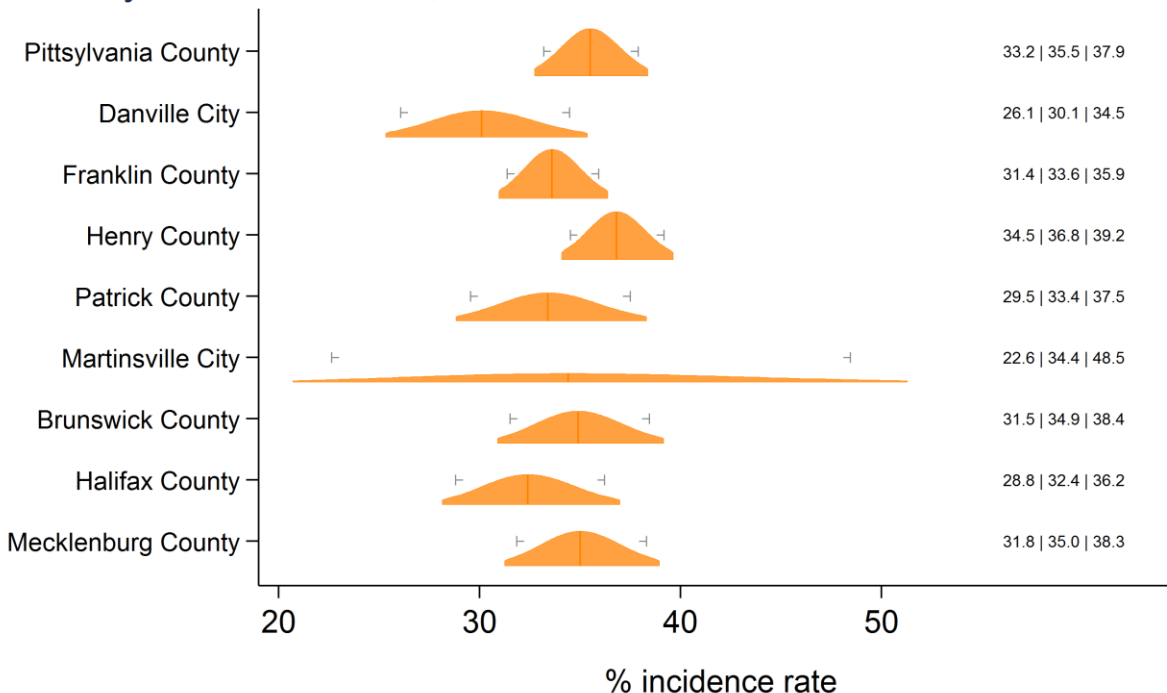
County	1-sided 95% LCB	Point Estimate	1-sided 95% UCB
Pittsylvania County	33.2	35.5	37.9
Danville City	26.1	30.1	34.5
Franklin County	31.4	33.6	35.9
Henry County	34.5	36.8	39.2
Patrick County	29.5	33.4	37.5
Martinsville City	22.6	34.4	48.5
Brunswick County	31.5	34.9	38.4
Halifax County	28.8	32.4	36.2
Mecklenburg County	31.8	35.0	38.3

% incidence rate

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

Lifetime arthritis, gout, lupus, fibromyalgia
Chesterfield, Chickahominy, Henrico and Richmond HDs
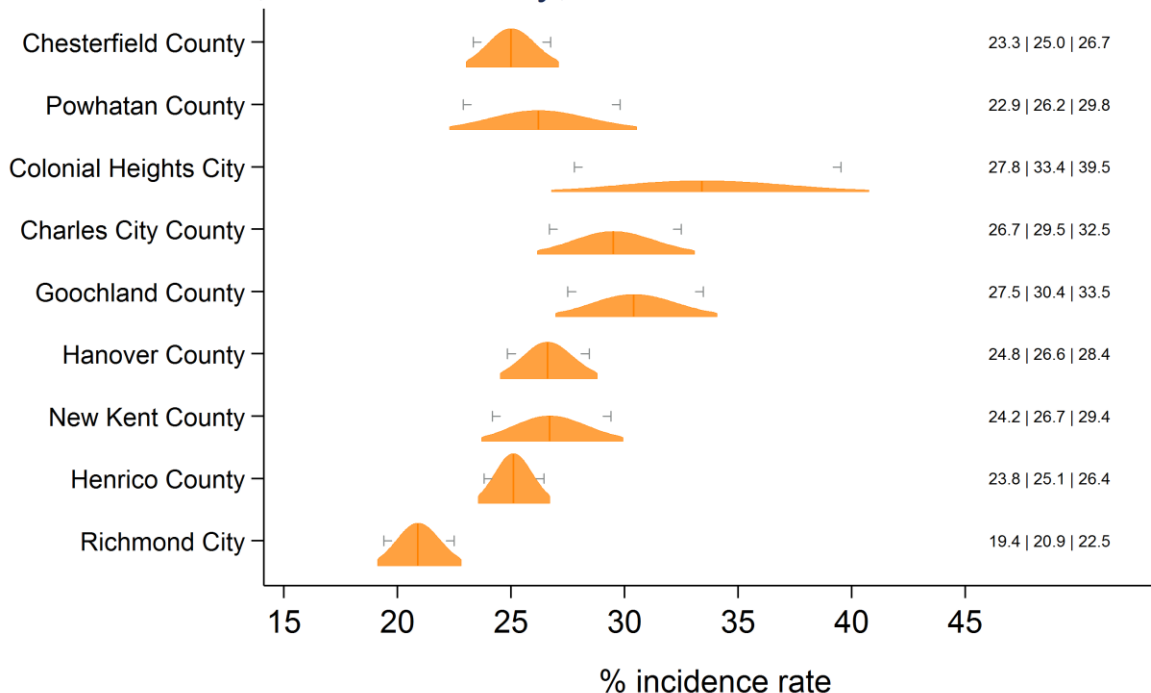
County/City	1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Chesterfield County	23.3 | 25.0 | 26.7
Powhatan County	22.9 | 26.2 | 29.8
Colonial Heights City	27.8 | 33.4 | 39.5
Charles City County	26.7 | 29.5 | 32.5
Goochland County	27.5 | 30.4 | 33.5
Hanover County	24.8 | 26.6 | 28.4
New Kent County	24.2 | 26.7 | 29.4
Henrico County	23.8 | 25.1 | 26.4
Richmond City	19.4 | 20.9 | 22.5

% incidence rate

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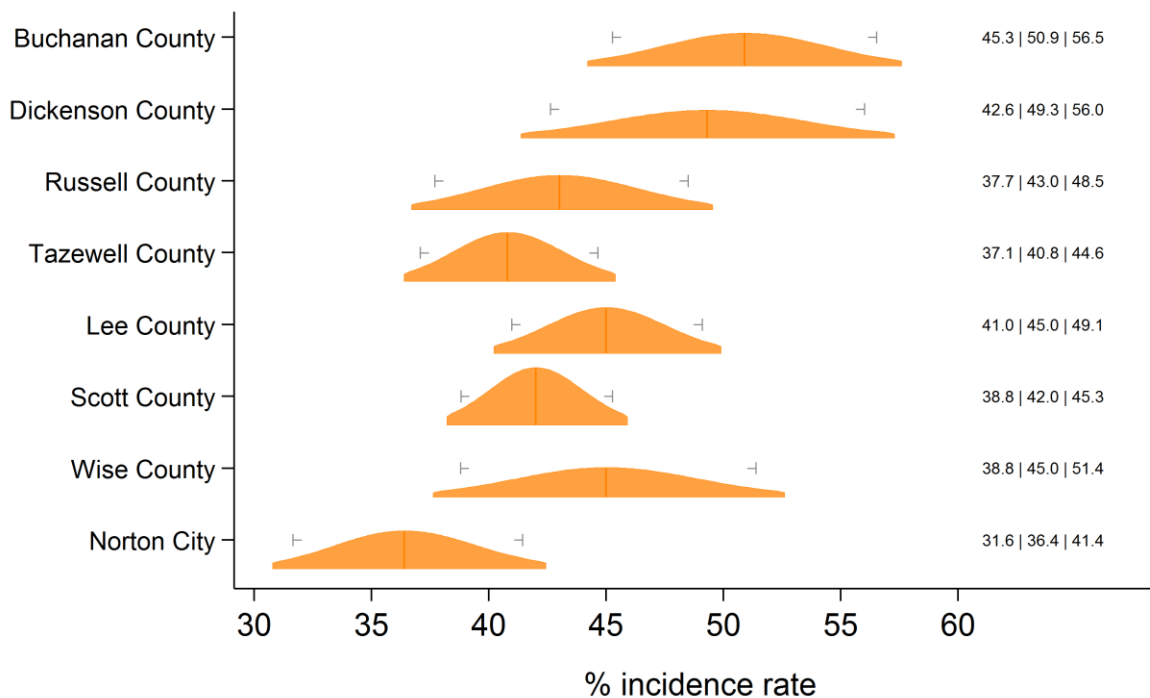Gray markers: 90% confidence interval

Lifetime arthritis, gout, lupus, fibromyalgia
Rappahannock/Rapidan and Rappahannock HDs

County	1-sided 95% LCB	Point Estimate	1-sided 95% UCB
Caroline County	25.1	27.6	30.3
King George County	21.5	25.2	29.3
Spotsylvania County	18.5	20.3	22.3
Stafford County	18.9	20.5	22.2
Fredericksburg City	16.2	19.6	23.5
Culpeper County	25.2	27.9	30.7
Fauquier County	27.7	30.5	33.5
Madison County	26.4	29.2	32.2
Orange County	25.0	28.6	32.5
Rappahannock County	19.4	22.7	26.4

% incidence rate

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

Lifetime arthritis, gout, lupus, fibromyalgia Crater, Peninsula and Hampton HDs

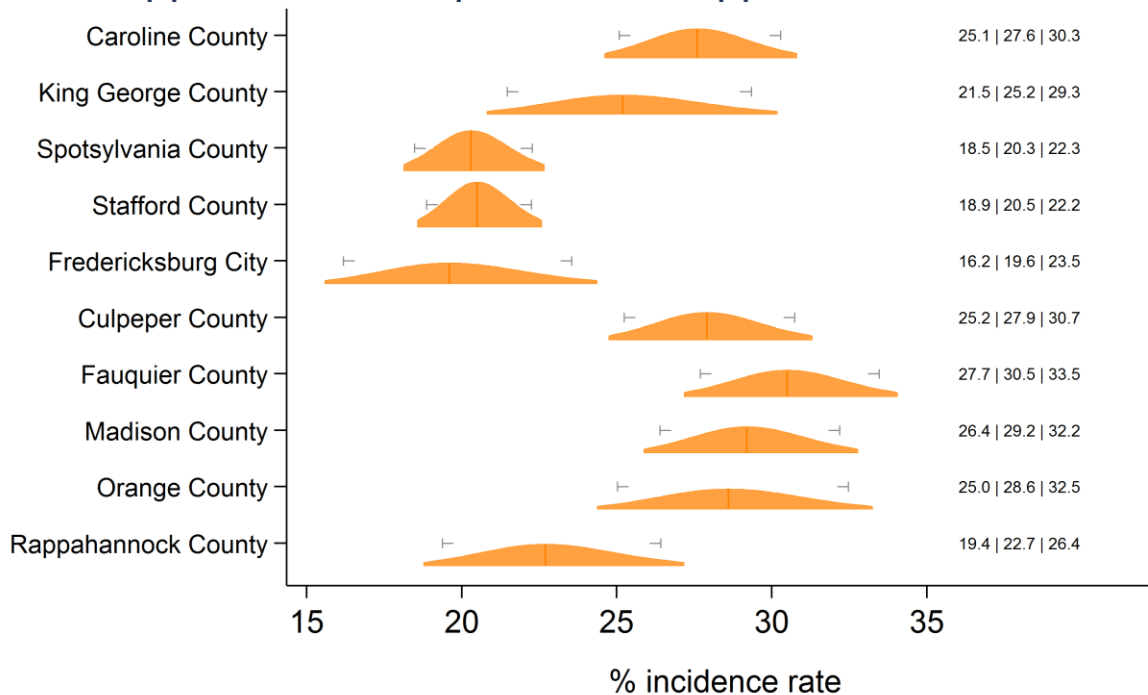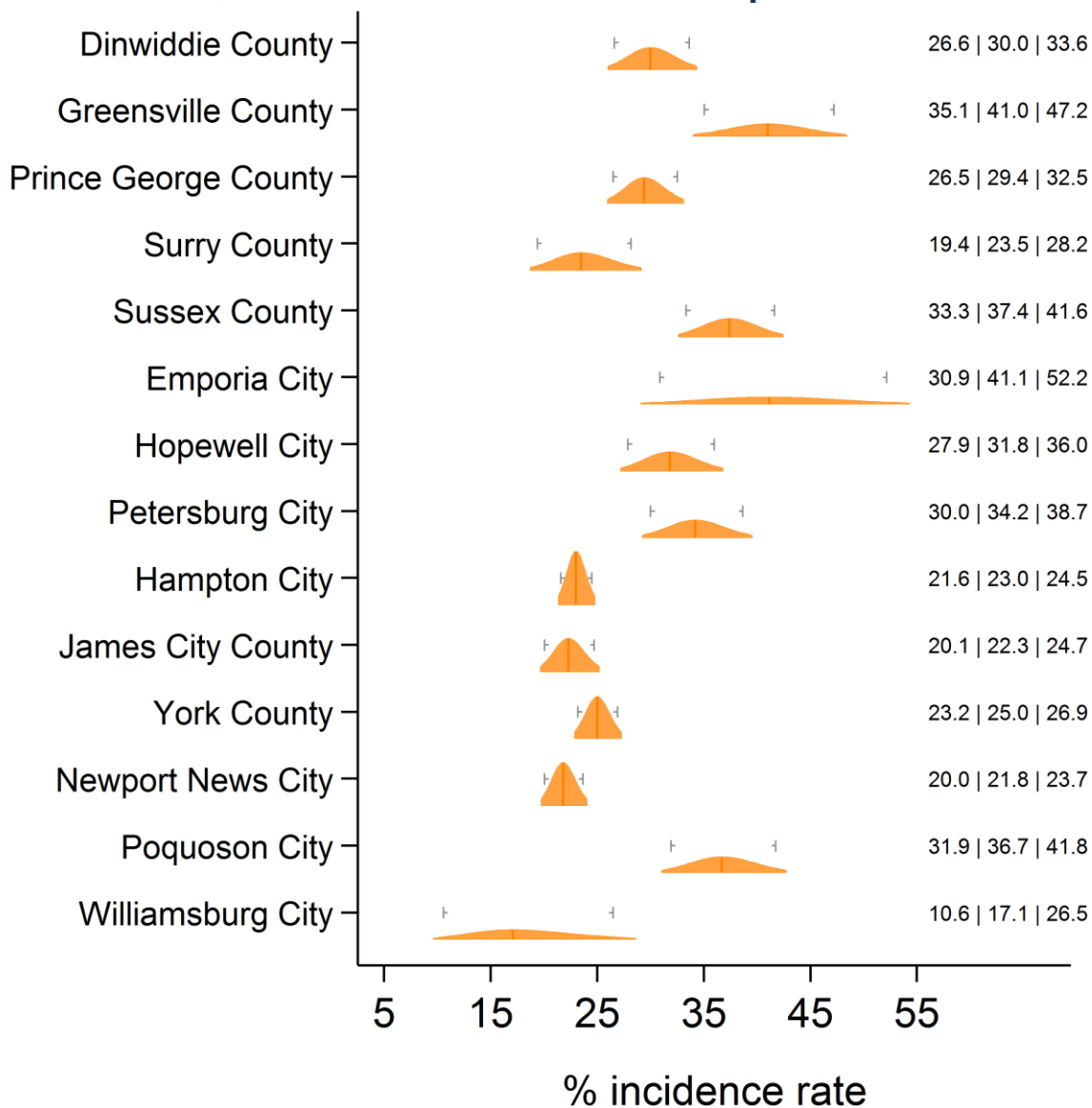| County/City	LCB	Point	UCB
Dinwiddie County	26.6	30.0	33.6
Greensville County	35.1	41.0	47.2
Prince George County	26.5	29.4	32.5
Surry County	19.4	23.5	28.2
Sussex County	33.3	37.4	41.6
Emporia City	30.9	41.1	52.2
Hopewell City	27.9	31.8	36.0
Petersburg City	30.0	34.2	38.7
Hampton City	21.6	23.0	24.5
James City County	20.1	22.3	24.7
York County	23.2	25.0	26.9
Newport News City	20.0	21.8	23.7
Poquoson City	31.9	36.7	41.8
Williamsburg City	10.6	17.1	26.5

% incidence rate

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

Lifetime arthritis, gout, lupus, fibromyalgia Eastern Shore and Three Rivers HDs
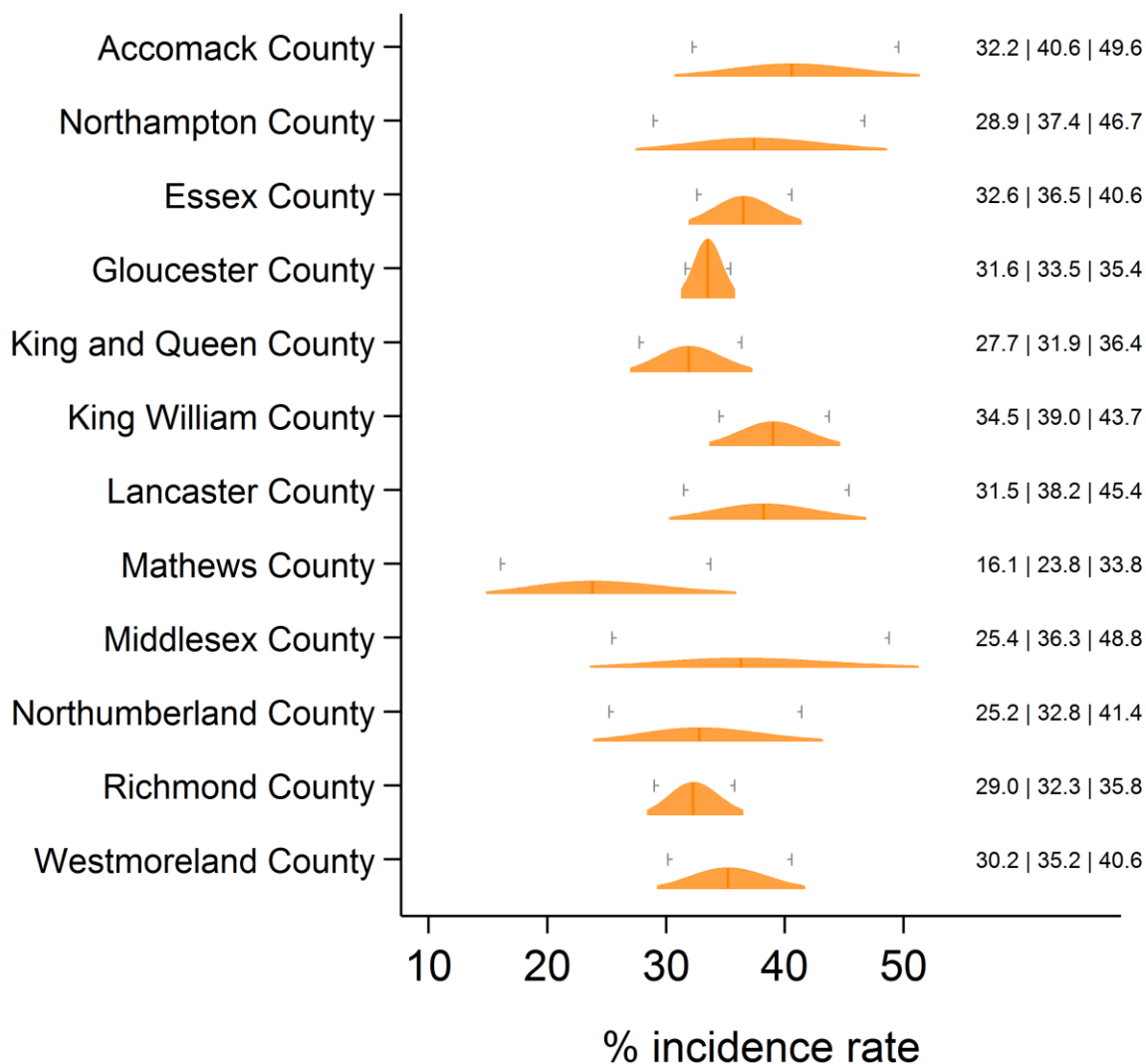
County	LCB | Point | UCB
Accomack County	32.2 | 40.6 | 49.6
Northampton County	28.9 | 37.4 | 46.7
Essex County	32.6 | 36.5 | 40.6
Gloucester County	31.6 | 33.5 | 35.4
King and Queen County	27.7 | 31.9 | 36.4
King William County	34.5 | 39.0 | 43.7
Lancaster County	31.5 | 38.2 | 45.4
Mathews County	16.1 | 23.8 | 33.8
Middlesex County	25.4 | 36.3 | 48.8
Northumberland County	25.2 | 32.8 | 41.4
Richmond County	29.0 | 32.3 | 35.8
Westmoreland County	30.2 | 35.2 | 40.6

% 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: 43 areas.

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

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

SAE estimate is outside the 95% direct Wilson CI: 5 areas.

SAE Wilson 95% CI is fully inside the 95% direct Wilson CI: 113 areas.

SAE Wilson 95% CI partially overlaps with the 95% direct Wilson CI: 20 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: 126 areas.

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

Direct standard error is zero: 7 areas.

Proportion of SAE variance due to ACS sampling error: min = 0.32%; med = 5.17%; max = 25.17%.

Proportion of SAE variance to sampling error in regression coefficient estimates: min = 73.83%; med = 92.92%; max = 99.22%.

Proportion of SAE variance due to model selection: min = 0.08%; med = 1.06%; max = 9.99%.