Indicator 18: High Cholesterol

Internal variable name: outc18_highchol

Definition: Have you EVER been told by a doctor, nurse or other health professional that your blood cholesterol is high?

Predictive models

	Mixed, demos only	Logit, no area effects	Mixed with area covariates
	b/se	b/se	b/se
Outcome 18: High Cholesterol			
NH Black vs. NH White	-0.0217 (0.0730)	-0.0257 (0.0885)	-0.0257 (0.0740)
NH Asian vs. NH White	-0.0161 (0.1837)	-0.0538 (0.2222)	-0.0538 (0.1875)
NH Other vs. NH White	0.0620 (0.1746)	0.0381 (0.1642)	0.0381 (0.1786)
Hispanic vs. NH White	-0.4480** (0.1431)	-0.4595* (0.1833)	-0.4595** (0.1399)
Female	0.3141*** (0.0672)	0.3183*** (0.0676)	0.3183*** (0.0672)
Age 18-34 vs. 65+	1.9478*** (0.1275)	1.9486*** (0.1278)	1.9486*** (0.1273)
Age 35-44 vs. 65+	1.1884*** (0.1215)	1.1812*** (0.1114)	1.1812*** (0.1201)
Age 45-54 vs. 65+	0.7294*** (0.0768)	0.7364*** (0.0872)	0.7364*** (0.0757)
Age 55-64 vs. 65+	0.2734*** (0.0692)	0.2807*** (0.0781)	0.2807*** (0.0704)
Crude mortality rate of intentional self-harm (suicide) per 10K		-0.1312** (0.0501)	-0.1312*** (0.0365)
% group quarter population		-0.0155 (0.0220)	-0.0155 (0.0130)
VA BRFSS 2014 SAE outc11_skin_cancer		10.5536*** (2.3736)	10.5536*** (2.1153)
% moved last year, ACS 2016 5yr		-0.0085 (0.0223)	-0.0085 (0.0191)
Melanoma Male Rate		-0.0023 (0.0020)	-0.0023 (0.0015)
Drug overdose mortality rate, County Rankings/CDC		-0.0978* (0.0421)	-0.0978* (0.0384)
o.% moved last year, ACS 2016 5yr		0.0000 (.)	
c.CHR_overdose_model#c.PDB_pct_diff_hu_1yr_ago_ACS126		0.0056*	0.0056**

		(0.0028)	(0.0021)
Intercept	-0.2779***	-0.3599	-0.3599
	(0.0591)	(0.3655)	(0.3272)
Area effect variance	0.0000		0.0000
	(0.0000)		(0.0000)

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

Results

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Augusta County	51015	64.3%	(52.6%, 74.5%)	59.2%	(56.1%, 62.3%)
Bath County	51017	61.2%	(24.9%, 88.2%)	59.4%	(52.8%, 65.7%)
Caroline County	51033	76.8%	(50.5%, 91.5%)	61.4%	(56.1%, 66.5%)
Clarke County	51043	47.5%	(22.0%, 74.4%)	58.2%	(54.1%, 62.1%)
Culpeper County	51047	52.4%	(34.5%, 69.7%)	57.3%	(54.7%, 59.9%)
Fauquier County	51061	67.2%	(51.3%, 80.0%)	61.2%	(57.7%, 64.5%)
Frederick County	51069	61.4%	(46.9%, 74.2%)	58.9%	(55.7%, 62.0%)
Highland County	51091	45.3%	(13.0%, 82.1%)	42.7%	(32.7%, 53.4%)
King George County	51099	77.4%	(51.0%, 91.9%)	60.0%	(57.0%, 62.8%)
Madison County	51113	77.5%	(52.8%, 91.4%)	61.3%	(56.6%, 65.9%)
Orange County	51137	58.0%	(38.4%, 75.4%)	57.8%	(54.7%, 60.8%)
Page County	51139	55.2%	(31.2%, 77.1%)	49.2%	(44.9%, 53.6%)
Rappahannock County	51157	41.1%	(17.9%, 69.0%)	49.0%	(43.9%, 54.1%)
Rockbridge County	51163	62.3%	(43.4%, 78.0%)	58.9%	(56.0%, 61.8%)
Rockingham County	51165	60.7%	(47.3%, 72.7%)	63.9%	(60.3%, 67.3%)
Shenandoah County	51171	65.8%	(48.1%, 79.9%)	59.2%	(56.2%, 62.2%)
Spotsylvania County	51177	69.0%	(57.0%, 78.8%)	61.0%	(58.5%, 63.4%)
Stafford County	51179	78.6%	(68.4%, 86.1%)	65.3%	(62.2%, 68.3%)
Warren County	51187	60.0%	(38.7%, 78.1%)	53.6%	(49.9%, 57.2%)
Buena Vista City	51530	66.6%	(25.9%, 91.9%)	71.7%	(66.6%, 76.4%)
Fredericksburg City	51630	64.8%	(41.0%, 83.0%)	66.2%	(62.4%, 69.7%)
Harrisonburg City	51660	57.1%	(15.4%, 90.6%)	63.2%	(54.2%, 71.3%)
Lexington City	51678	100.0%	(0.6%, 100.0%)	41.4%	(28.5%, 55.7%)
Staunton City	51790	49.0%	(16.6%, 82.3%)	63.1%	(57.1%, 68.8%)
Waynesboro City	51820	86.1%	(43.5%, 95.1%)	61.7%	(58.0%, 65.2%)
Winchester City	51840	87.3%	(33.3%, 96.4%)	60.3%	(56.3%, 64.2%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Albemarle County	51003	67.6%	(56.3%, 77.1%)	65.9%	(62.0%, 69.5%)
Alleghany County	51005	61.4%	(36.1%, 81.8%)	53.3%	(49.2%, 57.4%)
Amherst County	51009	67.3%	(46.1%, 83.2%)	59.5%	(55.3%, 63.7%)
Appomattox County	51011	59.7%	(36.3%, 79.4%)	59.1%	(54.0%, 64.0%)
Arlington City	51013	64.8%	(53.7%, 74.6%)	65.9%	(62.1%, 69.5%)
Bedford County	51019	66.5%	(55.8%, 75.6%)	59.8%	(56.9%, 62.6%)
Botetourt County	51023	78.8%	(59.3%, 90.5%)	67.6%	(63.1%, 71.8%)
Campbell County	51031	62.8%	(46.9%, 76.3%)	61.4%	(57.7%, 65.1%)
Craig County	51045	60.0%	(15.4%, 92.5%)	68.6%	(58.8%, 77.0%)
Fairfax County	51059	68.1%	(64.0%, 71.9%)	45.7%	(43.2%, 48.3%)
Fluvanna County	51065	64.1%	(43.7%, 80.5%)	60.4%	(57.1%, 63.6%)
Greene County	51079	59.2%	(31.7%, 82.0%)	56.7%	(52.7%, 60.7%)
Loudoun County	51107	63.8%	(55.3%, 71.5%)	61.9%	(59.1%, 64.6%)
Louisa County	51109	71.8%	(53.3%, 85.1%)	64.4%	(60.4%, 68.2%)
Nelson County	51125	70.4%	(45.5%, 87.2%)	60.7%	(56.9%, 64.4%)
Prince William County	51153	67.8%	(61.0%, 73.9%)	57.8%	(54.5%, 61.0%)
Roanoke County	51161	63.9%	(52.8%, 73.7%)	61.9%	(57.8%, 65.8%)
Alexandria City	51510	70.0%	(59.5%, 78.7%)	62.1%	(57.9%, 66.2%)
Charlottesville City	51540	76.8%	(52.6%, 90.8%)	58.6%	(53.7%, 63.3%)
Covington City	51580	24.4%	(1.5%, 92.1%)	29.6%	(18.3%, 44.3%)
Fairfax City	51600	60.4%	(46.7%, 72.7%)	53.8%	(48.9%, 58.6%)
Falls Church City	51610	72.4%	(42.1%, 90.4%)	65.7%	(60.8%, 70.3%)
Lynchburg City	51680	57.9%	(43.4%, 71.2%)	67.9%	(62.3%, 73.0%)
Manassas City	51683	45.6%	(14.2%, 80.9%)	54.6%	(49.6%, 59.5%)
Manassas Park City	51685	26.6%	(4.2%, 74.9%)	56.5%	(50.8%, 62.0%)
Salem City	51775	53.5%	(18.4%, 85.4%)	54.0%	(48.3%, 59.6%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Bland County	51021	57.8%	(28.8%, 82.2%)	45.8%	(40.0%, 51.6%)
Buchanan County	51027	46.4%	(24.7%, 69.6%)	43.5%	(34.7%, 52.7%)
Carroll County	51035	74.8%	(55.6%, 87.5%)	57.7%	(55.0%, 60.3%)
Dickenson County	51051	34.0%	(16.6%, 57.3%)	36.1%	(29.0%, 43.9%)
Floyd County	51063	59.4%	(38.1%, 77.7%)	52.2%	(47.3%, 57.1%)
Franklin County	51067	61.6%	(41.7%, 78.2%)	59.6%	(56.5%, 62.7%)
Giles County	51071	39.8%	(23.1%, 59.4%)	60.2%	(55.4%, 64.8%)
Grayson County	51077	54.8%	(29.3%, 78.1%)	52.7%	(49.4%, 56.0%)
Henry County	51089	37.8%	(23.1%, 55.1%)	51.7%	(47.1%, 56.2%)
Lee County	51105	40.7%	(17.0%, 69.6%)	50.2%	(44.0%, 56.5%)
Montgomery County	51121	84.3%	(75.6%, 90.3%)	73.7%	(68.8%, 78.2%)
Patrick County	51141	69.8%	(42.5%, 87.9%)	49.7%	(45.8%, 53.6%)
Pittsylvania County	51143	67.0%	(56.5%, 76.1%)	60.7%	(57.8%, 63.4%)
Pulaski County	51155	43.9%	(25.2%, 64.5%)	62.7%	(56.0%, 68.9%)
Russell County	51167	57.4%	(36.7%, 75.8%)	50.4%	(42.0%, 58.7%)
Scott County	51169	61.0%	(39.9%, 78.7%)	57.2%	(52.3%, 61.9%)
Smyth County	51173	56.9%	(29.6%, 80.6%)	58.5%	(55.1%, 61.8%)
Tazewell County	51185	81.0%	(65.7%, 88.2%)	53.5%	(46.2%, 60.6%)
Washington County	51191	60.3%	(45.6%, 73.4%)	63.0%	(59.3%, 66.5%)
Wise County	51195	60.4%	(44.9%, 74.0%)	56.8%	(50.9%, 62.5%)
Wythe County	51197	48.0%	(28.3%, 68.4%)	53.0%	(46.4%, 59.5%)
Bristol City	51520	66.2%	(12.5%, 96.4%)	73.2%	(67.0%, 78.5%)
Danville City	51590	68.6%	(42.3%, 86.7%)	61.1%	(57.2%, 64.8%)
Galax City	51640	40.0%	(3.7%, 92.1%)	50.8%	(42.3%, 59.2%)
Martinsville City	51690	59.9%	(15.4%, 92.4%)	52.7%	(48.4%, 57.0%)
Norton City	51720	81.4%	(29.4%, 95.3%)	84.2%	(77.4%, 89.2%)
Radford City	51750	85.7%	(42.0%, 95.5%)	80.7%	(75.4%, 85.1%)
Roanoke City	51770	64.6%	(51.5%, 75.9%)	59.5%	(55.8%, 63.1%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Amelia County	51007	38.6%	(20.5%, 60.6%)	42.8%	(36.0%, 49.9%)
Brunswick County	51025	50.3%	(26.2%, 74.3%)	60.0%	(57.2%, 62.8%)
Buckingham County	51029	63.4%	(41.9%, 80.6%)	59.5%	(56.4%, 62.6%)
Charles City County	51036	60.4%	(18.7%, 91.0%)	52.0%	(47.7%, 56.3%)
Charlotte County	51037	48.8%	(27.9%, 70.2%)	55.0%	(51.7%, 58.3%)
Chesterfield County	51041	63.6%	(55.9%, 70.7%)	58.8%	(56.5%, 61.0%)
Cumberland County	51049	76.7%	(57.3%, 89.0%)	52.3%	(47.3%, 57.2%)
Dinwiddie County	51053	35.7%	(17.3%, 59.6%)	54.4%	(50.5%, 58.3%)
Goochland County	51075	68.3%	(41.8%, 86.5%)	63.9%	(60.6%, 67.1%)
Greensville County	51081	40.2%	(13.4%, 74.5%)	57.3%	(53.3%, 61.2%)
Halifax County	51083	56.8%	(40.2%, 72.0%)	51.8%	(47.5%, 56.0%)
Hanover County	51085	68.3%	(56.7%, 78.0%)	63.7%	(60.3%, 67.0%)
Henrico County	51087	63.3%	(54.0%, 71.8%)	60.9%	(58.9%, 62.8%)
Lunenburg County	51111	70.9%	(43.8%, 88.4%)	56.4%	(51.8%, 60.9%)
Mecklenburg County	51117	68.7%	(55.4%, 79.4%)	60.3%	(56.0%, 64.4%)
New Kent County	51127	61.4%	(35.0%, 82.4%)	48.5%	(44.5%, 52.6%)
Nottoway County	51135	43.5%	(18.2%, 72.7%)	56.0%	(51.5%, 60.4%)
Powhatan County	51145	71.8%	(43.6%, 89.3%)	62.9%	(59.6%, 66.0%)
Prince Edward County	51147	66.3%	(48.1%, 80.6%)	62.3%	(58.4%, 66.0%)
Prince George County	51149	67.4%	(49.8%, 81.1%)	58.2%	(55.0%, 61.4%)
Surry County	51181	70.4%	(37.3%, 90.5%)	56.1%	(50.6%, 61.3%)
Sussex County	51183	62.3%	(41.6%, 79.4%)	57.4%	(53.4%, 61.2%)
Colonial Heights City	51570	56.9%	(32.7%, 78.2%)	49.6%	(44.8%, 54.3%)
Emporia City	51595	37.1%	(1.4%, 96.5%)	53.8%	(44.2%, 63.1%)
Hopewell City	51670	53.7%	(29.5%, 76.4%)	51.0%	(47.3%, 54.7%)
Petersburg City	51730	68.2%	(48.2%, 83.1%)	55.0%	(51.4%, 58.6%)
Richmond City	51760	75.0%	(64.1%, 83.4%)	69.4%	(65.9%, 72.7%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Accomack County	51001	59.2%	(44.2%, 72.8%)	49.5%	(44.8%, 54.3%)
Essex County	51057	71.2%	(44.8%, 88.3%)	52.7%	(46.6%, 58.7%)
Gloucester County	51073	58.6%	(43.5%, 72.3%)	59.3%	(55.8%, 62.7%)
Isle of Wight County	51093	70.5%	(49.3%, 85.4%)	53.8%	(49.8%, 57.7%)
James City County	51095	76.2%	(65.2%, 84.6%)	66.7%	(61.7%, 71.2%)
King and Queen County	51097	57.5%	(27.4%, 82.9%)	49.2%	(44.4%, 54.1%)
King William County	51101	25.1%	(8.2%, 55.7%)	53.3%	(49.5%, 57.1%)
Lancaster County	51103	44.3%	(24.5%, 66.2%)	56.5%	(51.1%, 61.7%)
Mathews County	51115	52.3%	(26.0%, 77.4%)	48.9%	(45.1%, 52.7%)
Middlesex County	51119	51.0%	(28.9%, 72.8%)	57.1%	(51.8%, 62.3%)
Northampton County	51131	53.4%	(33.4%, 72.4%)	51.5%	(47.8%, 55.2%)
Northumberland County	51133	58.3%	(32.7%, 80.0%)	65.4%	(58.2%, 72.0%)
Richmond County	51159	63.6%	(31.9%, 86.6%)	56.0%	(51.6%, 60.3%)
Southampton County	51175	63.3%	(28.7%, 88.1%)	58.3%	(52.7%, 63.8%)
Westmoreland County	51193	75.6%	(50.5%, 90.4%)	55.6%	(51.9%, 59.1%)
York County	51199	73.4%	(57.0%, 85.2%)	67.8%	(63.8%, 71.5%)
Chesapeake City	51550	61.3%	(51.3%, 70.3%)	59.3%	(57.1%, 61.4%)
Franklin City	51620	73.3%	(51.7%, 87.6%)	52.8%	(48.2%, 57.3%)
Hampton City	51650	69.2%	(59.4%, 77.6%)	61.0%	(57.8%, 64.1%)
Newport News City	51700	67.1%	(56.1%, 76.5%)	62.1%	(59.2%, 65.0%)
Norfolk City	51710	68.2%	(59.8%, 75.6%)	66.3%	(63.7%, 68.8%)
Poquoson City	51735	50.2%	(6.6%, 93.5%)	62.4%	(55.9%, 68.4%)
Portsmouth City	51740	68.6%	(57.9%, 77.7%)	61.2%	(58.0%, 64.3%)
Suffolk City	51800	67.2%	(53.7%, 78.4%)	57.7%	(55.0%, 60.4%)
Virginia Beach City	51810	66.0%	(59.7%, 71.7%)	61.3%	(58.8%, 63.7%)
Williamsburg City	51830	87.3%	(15.0%, 98.2%)	69.5%	(62.6%, 75.6%)

Graphical representation

High Cholesterol
Central Shenandoah and Lord Fairfax HDs

County	LCB | Point | UCB
Augusta County	56.1 | 59.2 | 62.3
Bath County	52.8 | 59.4 | 65.7
Highland County	32.5 | 42.7 | 53.6
Rockbridge County	56.0 | 58.9 | 61.8
Rockingham County	60.3 | 63.9 | 67.4
Buena Vista City	66.5 | 71.7 | 76.4
Harrisonburg City	54.2 | 63.2 | 71.4
Lexington City	28.2 | 41.4 | 56.0
Staunton City	57.0 | 63.1 | 68.8
Waynesboro City	58.0 | 61.7 | 65.3
Clarke County	54.1 | 58.2 | 62.2
Frederick County	55.7 | 58.9 | 62.0
Page County	44.8 | 49.2 | 53.6
Shenandoah County	56.2 | 59.2 | 62.2
Warren County	49.9 | 53.6 | 57.2
Winchester City	56.3 | 60.3 | 64.1

% incidence rate

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

High Cholesterol
Rappahannock/Rapidan and Rappahannock HDs
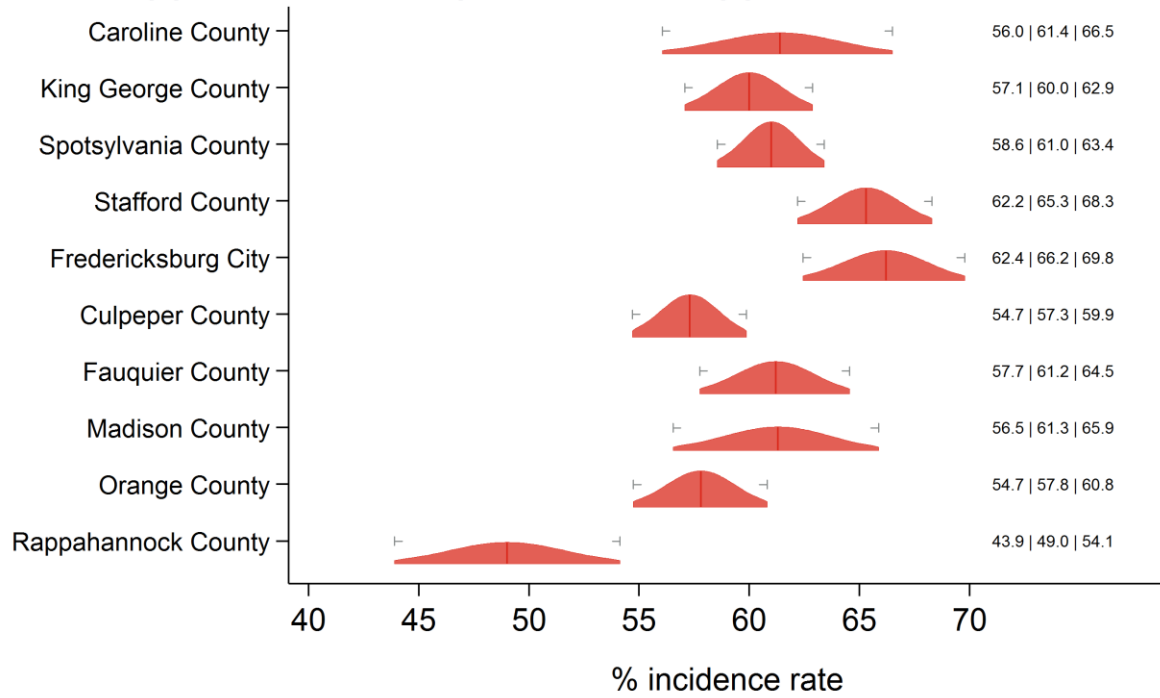
County	2-sided 95% LCB	Point Estimate	2-sided 95% UCB
Caroline County	56.0	61.4	66.5
King George County	57.1	60.0	62.9
Spotsylvania County	58.6	61.0	63.4
Stafford County	62.2	65.3	68.3
Fredericksburg City	62.4	66.2	69.8
Culpeper County	54.7	57.3	59.9
Fauquier County	57.7	61.2	64.5
Madison County	56.5	61.3	65.9
Orange County	54.7	57.8	60.8
Rappahannock County	43.9	49.0	54.1

% incidence rate

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

High Cholesterol
Thomas Jefferson and Piedmont HDs
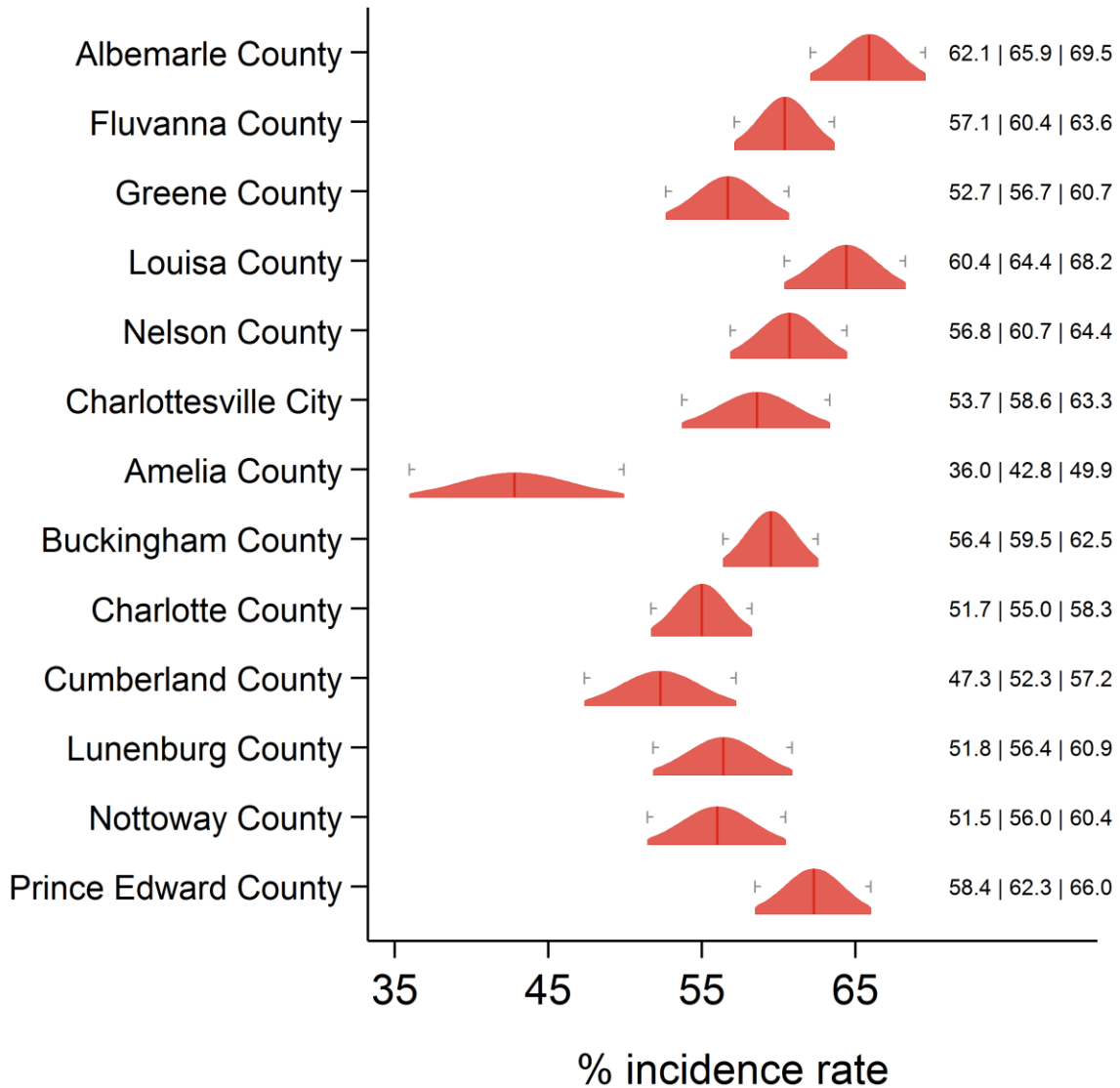
County	LCB	Point	UCB
Albemarle County	62.1	65.9	69.5
Fluvanna County	57.1	60.4	63.6
Greene County	52.7	56.7	60.7
Louisa County	60.4	64.4	68.2
Nelson County	56.8	60.7	64.4
Charlottesville City	53.7	58.6	63.3
Amelia County	36.0	42.8	49.9
Buckingham County	56.4	59.5	62.5
Charlotte County	51.7	55.0	58.3
Cumberland County	47.3	52.3	57.2
Lunenburg County	51.8	56.4	60.9
Nottoway County	51.5	56.0	60.4
Prince Edward County	58.4	62.3	66.0

% incidence rate

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

High Cholesterol
Alexandria, Fairfax, Arlington, Loudon, Prince William HDs

Alexandria City	57.8 | 62.1 | 66.2
Arlington City	62.1 | 65.9 | 69.5
Fairfax County	43.1 | 45.7 | 48.3
Fairfax City	48.9 | 53.8 | 58.6
Falls Church City	60.8 | 65.7 | 70.3
Loudoun County	59.1 | 61.9 | 64.6
Prince William County	54.5 | 57.8 | 61.0
Manassas City	49.6 | 54.6 | 59.5
Manassas Park City	50.8 | 56.5 | 62.0

% incidence rate

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

High Cholesterol
Alleghany, Roanoke and Central Virginia HDs

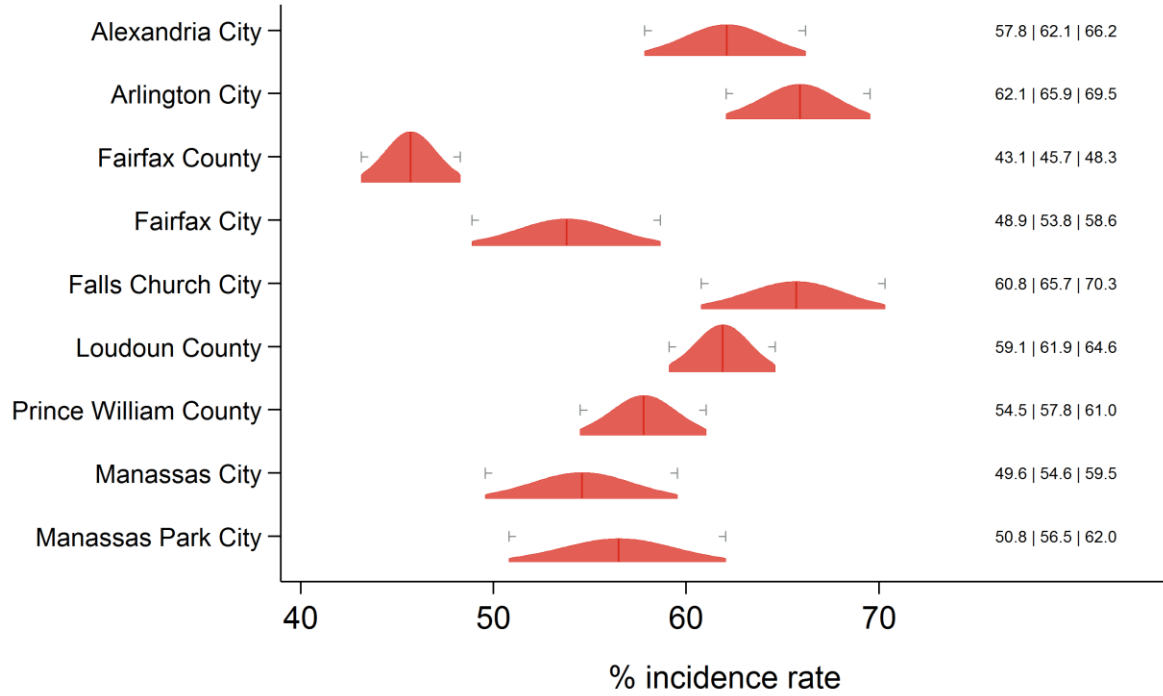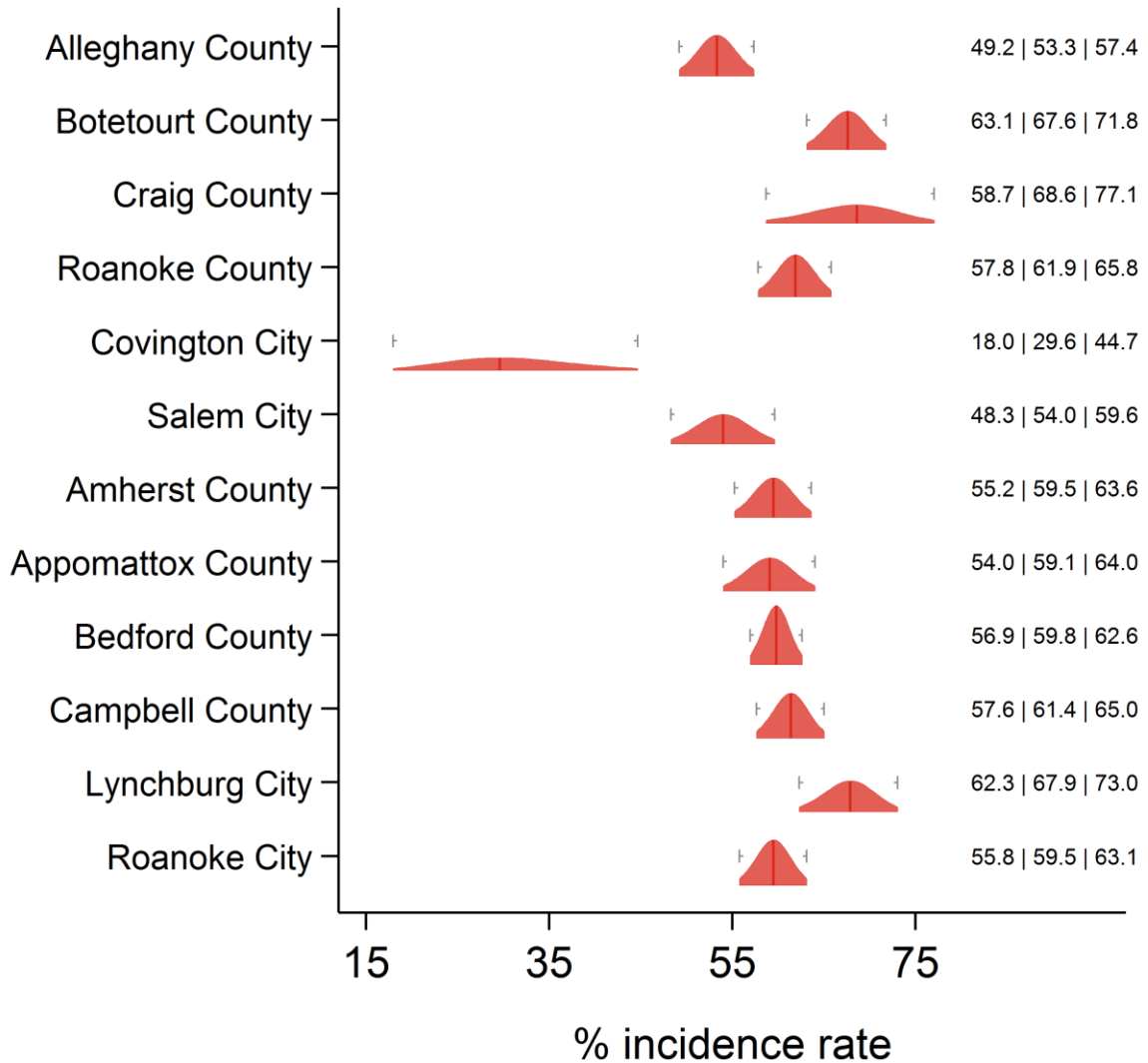| County/City	2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
Alleghany County	49.2 | 53.3 | 57.4
Botetourt County	63.1 | 67.6 | 71.8
Craig County	58.7 | 68.6 | 77.1
Roanoke County	57.8 | 61.9 | 65.8
Covington City	18.0 | 29.6 | 44.7
Salem City	48.3 | 54.0 | 59.6
Amherst County	55.2 | 59.5 | 63.6
Appomattox County	54.0 | 59.1 | 64.0
Bedford County	56.9 | 59.8 | 62.6
Campbell County	57.6 | 61.4 | 65.0
Lynchburg City	62.3 | 67.9 | 73.0
Roanoke City	55.8 | 59.5 | 63.1

% incidence rate

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

High Cholesterol
Cumberland Plateau and Lenowisco HDs

County	LCB	Point	UCB
Buchanan County	34.6	43.5	52.8
Dickenson County	29.0	36.1	43.9
Russell County	41.9	50.4	58.8
Tazewell County	46.2	53.5	60.7
Lee County	43.9	50.2	56.5
Scott County	52.3	57.2	62.0
Wise County	50.9	56.8	62.5
Norton City	77.4	84.2	89.2

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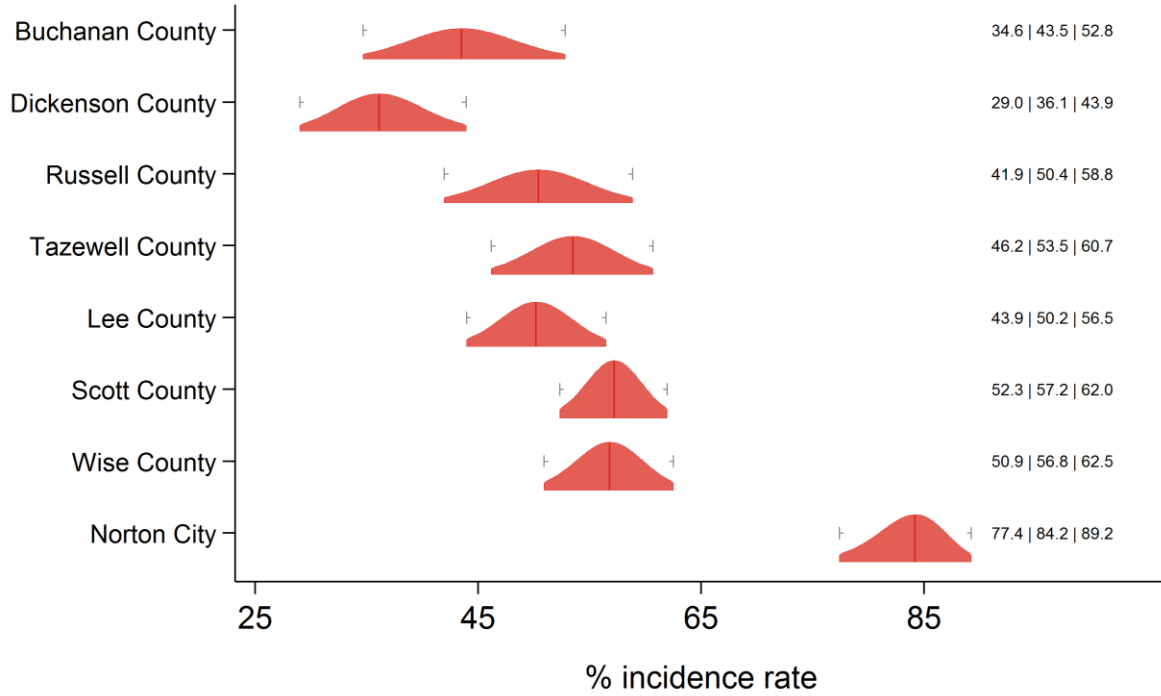
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
Gray markers: 95% confidence interval

High Cholesterol
Pittsylvania/Danville, Southside and West Piedmont HDs

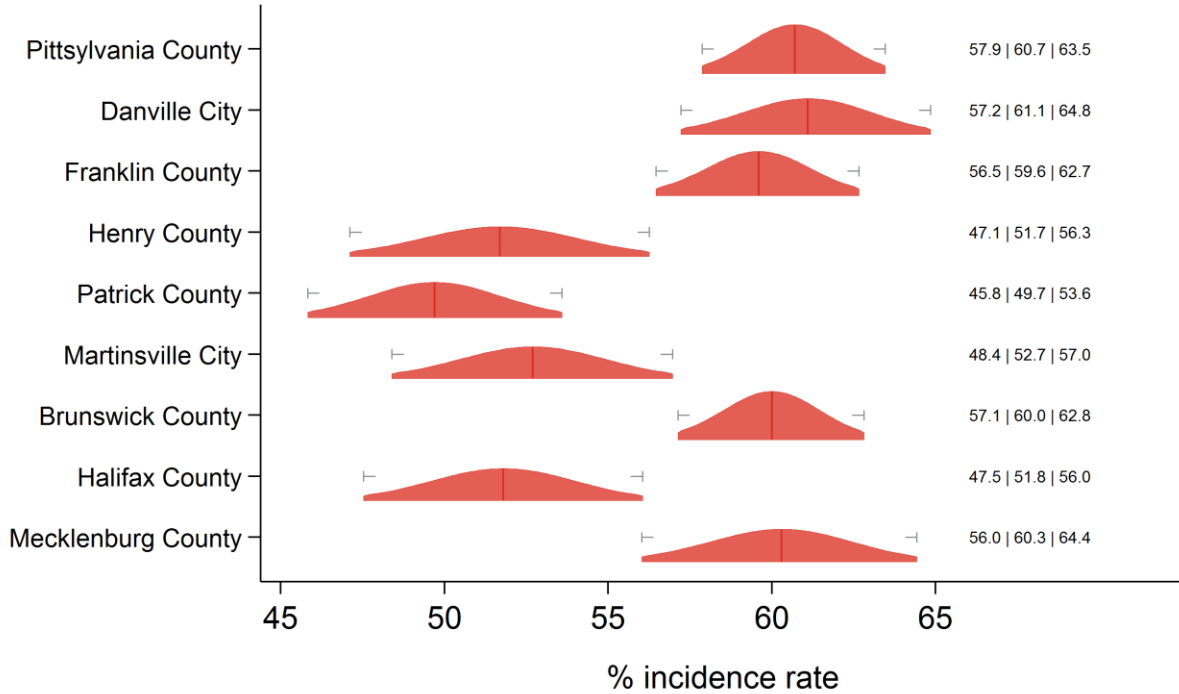| County	2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
Pittsylvania County	57.9 | 60.7 | 63.5
Danville City	57.2 | 61.1 | 64.8
Franklin County	56.5 | 59.6 | 62.7
Henry County	47.1 | 51.7 | 56.3
Patrick County	45.8 | 49.7 | 53.6
Martinsville City	48.4 | 52.7 | 57.0
Brunswick County	57.1 | 60.0 | 62.8
Halifax County	47.5 | 51.8 | 56.0
Mecklenburg County	56.0 | 60.3 | 64.4

% incidence rate

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

High Cholesterol
New River and Mount Rogers HDs

County	2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
Bland County	40.0 | 45.8 | 51.7
Carroll County	55.0 | 57.7 | 60.3
Grayson County	49.4 | 52.7 | 56.0
Smyth County	55.1 | 58.5 | 61.8
Washington County	59.3 | 63.0 | 66.6
Wythe County	46.4 | 53.0 | 59.5
Bristol City	67.0 | 73.2 | 78.6
Galax City	42.3 | 50.8 | 59.3
Floyd County	47.3 | 52.2 | 57.1
Giles County	55.4 | 60.2 | 64.8
Montgomery County	68.7 | 73.7 | 78.2
Pulaski County	56.0 | 62.7 | 69.0
Radford City	75.4 | 80.7 | 85.1

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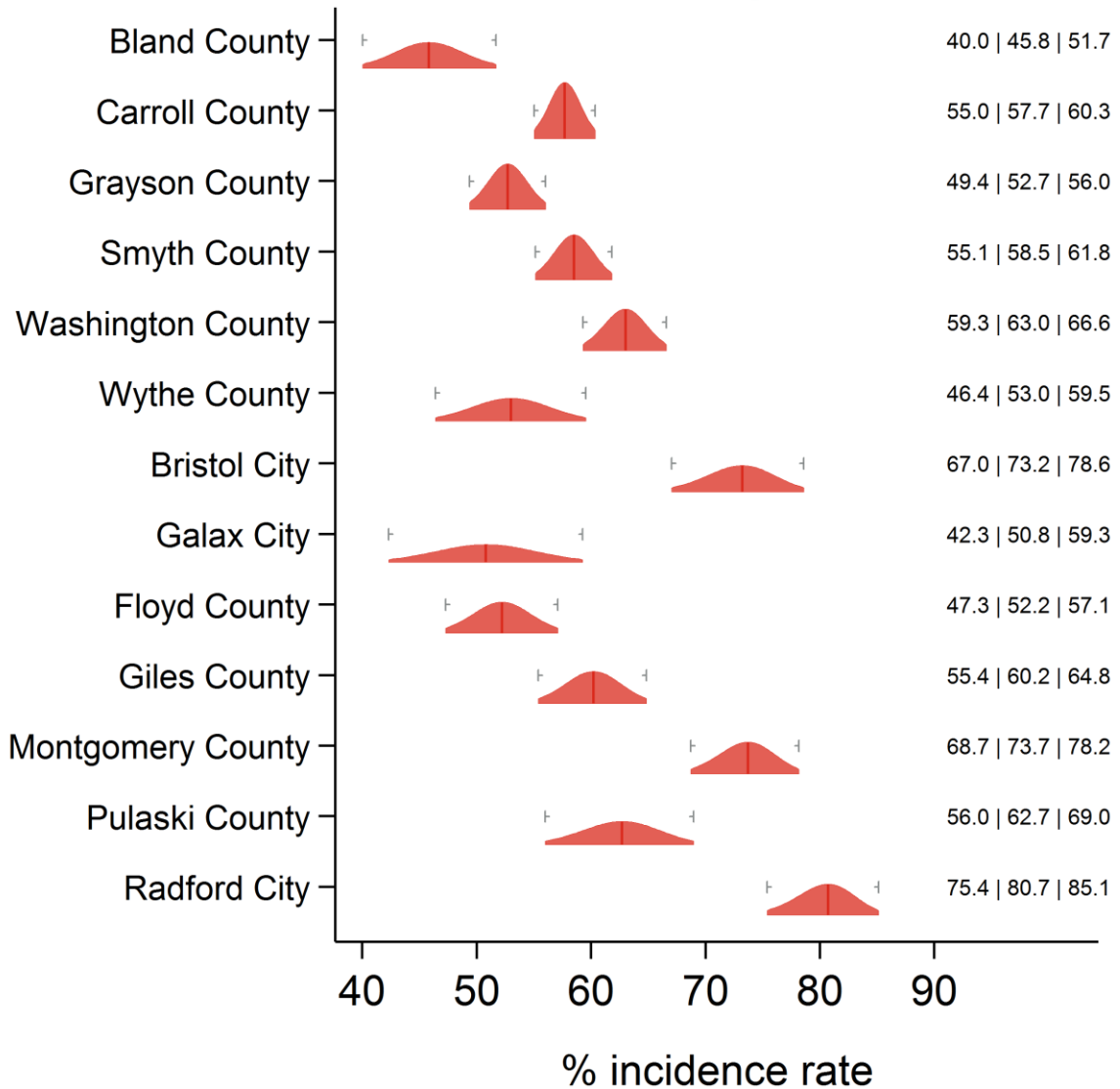
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
Gray markers: 95% confidence interval

High Cholesterol
Chesterfield, Chickahominy, Henrico and Richmond HDs
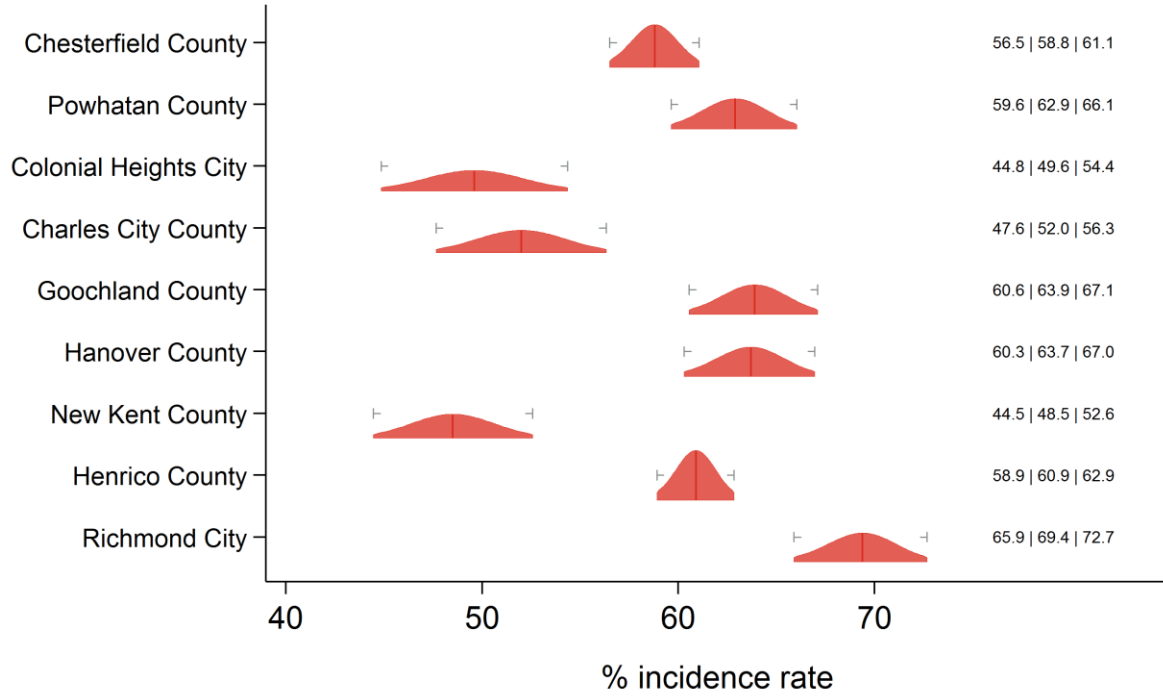
County	95% LCB | Point Estimate | 95% UCB
Chesterfield County	56.5 | 58.8 | 61.1
Powhatan County	59.6 | 62.9 | 66.1
Colonial Heights City	44.8 | 49.6 | 54.4
Charles City County	47.6 | 52.0 | 56.3
Goochland County	60.6 | 63.9 | 67.1
Hanover County	60.3 | 63.7 | 67.0
New Kent County	44.5 | 48.5 | 52.6
Henrico County	58.9 | 60.9 | 62.9
Richmond City	65.9 | 69.4 | 72.7

% incidence rate

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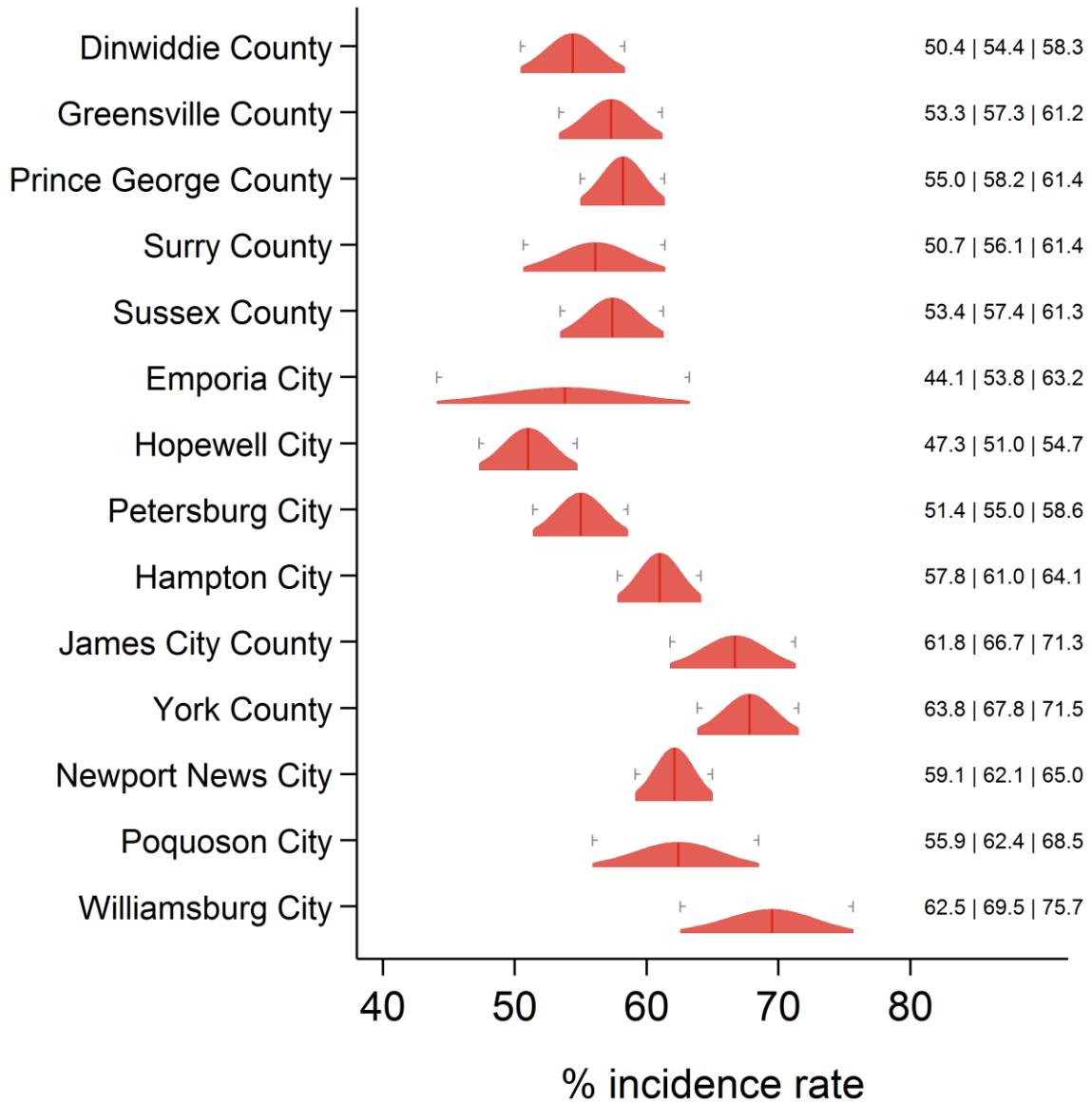Gray markers: 95% confidence interval

High Cholesterol
Crater, Peninsula and Hampton HDs

County/City	LCB	Point Estimate	UCB
Dinwiddie County	50.4	54.4	58.3
Greensville County	53.3	57.3	61.2
Prince George County	55.0	58.2	61.4
Surry County	50.7	56.1	61.4
Sussex County	53.4	57.4	61.3
Emporia City	44.1	53.8	63.2
Hopewell City	47.3	51.0	54.7
Petersburg City	51.4	55.0	58.6
Hampton City	57.8	61.0	64.1
James City County	61.8	66.7	71.3
York County	63.8	67.8	71.5
Newport News City	59.1	62.1	65.0
Poquoson City	55.9	62.4	68.5
Williamsburg City	62.5	69.5	75.7

% incidence rate

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

High Cholesterol
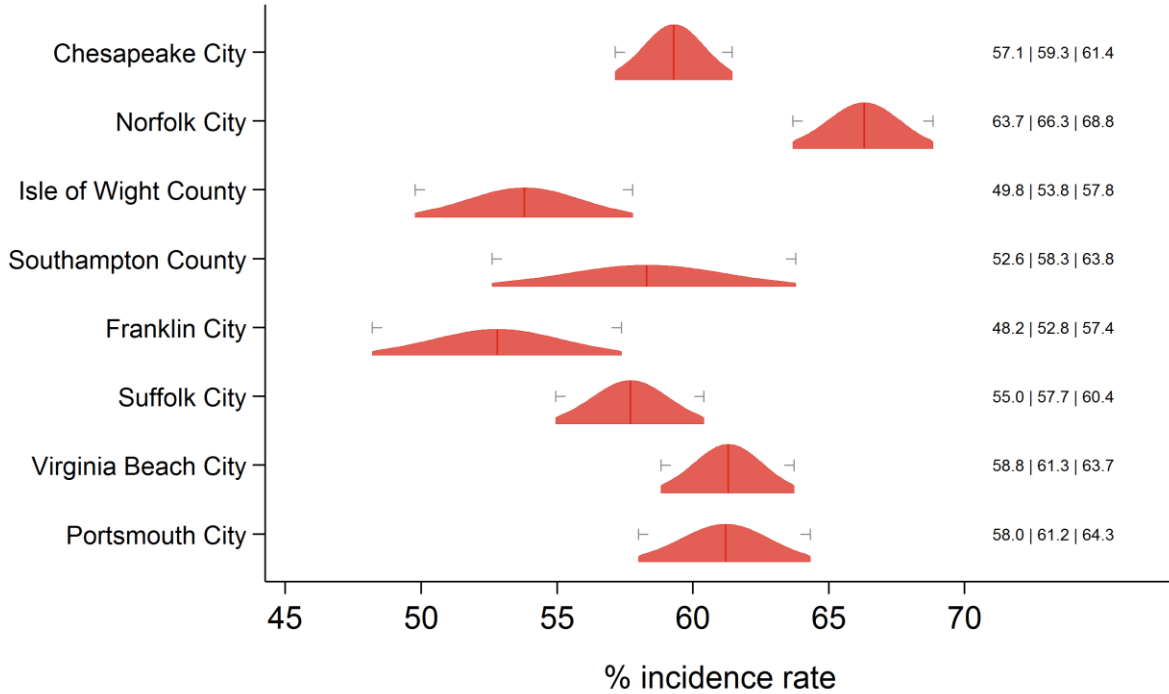## Eastern Shore and Three Rivers HDs
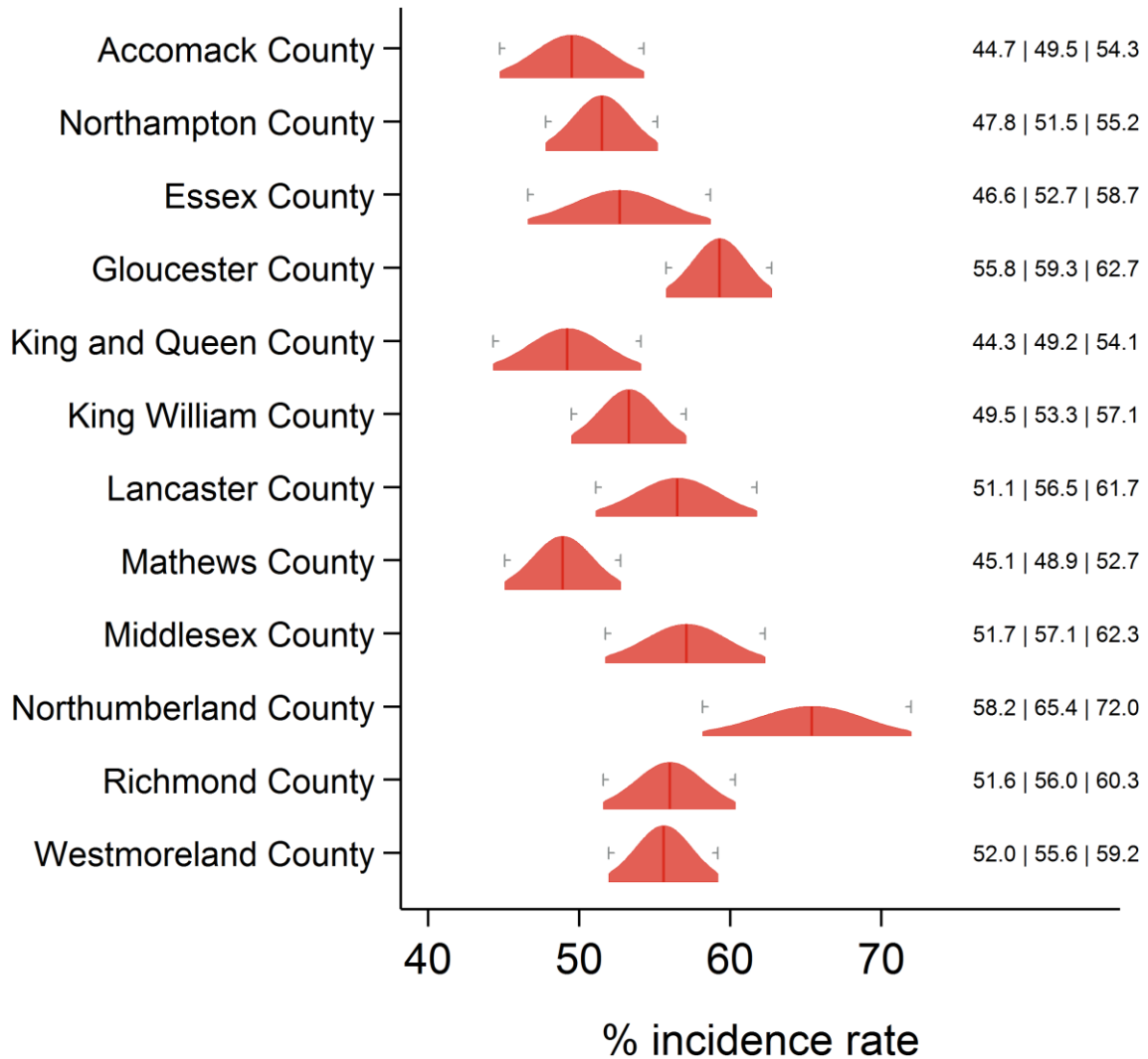
County	2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
Accomack County	44.7 | 49.5 | 54.3
Northampton County	47.8 | 51.5 | 55.2
Essex County	46.6 | 52.7 | 58.7
Gloucester County	55.8 | 59.3 | 62.7
King and Queen County	44.3 | 49.2 | 54.1
King William County	49.5 | 53.3 | 57.1
Lancaster County	51.1 | 56.5 | 61.7
Mathews County	45.1 | 48.9 | 52.7
Middlesex County	51.7 | 57.1 | 62.3
Northumberland County	58.2 | 65.4 | 72.0
Richmond County	51.6 | 56.0 | 60.3
Westmoreland County	52.0 | 55.6 | 59.2

% incidence rate

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

High Cholesterol
Norfolk,Portsmouth,Chesapeake,VA Beach,W. Tidewater HDs

City/County	2-sided 95% LCB	Point Estimate	2-sided 95% UCB
Chesapeake City	57.1	59.3	61.4
Norfolk City	63.7	66.3	68.8
Isle of Wight County	49.8	53.8	57.8
Southampton County	52.6	58.3	63.8
Franklin City	48.2	52.8	57.4
Suffolk City	55.0	57.7	60.4
Virginia Beach City	58.8	61.3	63.7
Portsmouth City	58.0	61.2	64.3

% 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: 38 areas.

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

SAE estimate is inside the 95% direct Wilson CI: 126 areas.

SAE estimate is outside the 95% direct Wilson CI: 7 areas.

SAE Wilson 95% CI is fully inside the 95% direct Wilson CI: 116 areas.

SAE Wilson 95% CI partially overlaps with the 95% direct Wilson CI: 17 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: 132 areas.

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

Direct standard error is zero: 1 areas.

Proportion of SAE variance due to ACS sampling error: min = 0.54%; med = 23.50%; max = 67.32%.

Proportion of SAE variance due to sampling error in regression coefficient estimates: min = 32.55%; med = 75.99%; max = 99.43%.

Proportion of SAE variance due to model selection: min = 0.00%; med = 0.21%; max = 8.94%.

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