

Indicator 19: Have you had a test for high blood sugar or diabetes within the past

Internal variable name: outc19_diabetes_test

Definition: Have you had a test for high blood sugar or diabetes within the past three years?

Predictive models

	Mixed, demos only	Logit, no area effects	Mixed with area covariates
	b/se	b/se	b/se
Outcome 19: Have you had a test for high blood sugar or diabetes within the past			
NH Black vs. NH White	0.0031 (0.0960)	0.0472 (0.1076)	0.0466 (0.0992)
NH Asian vs. NH White	-0.6797*** (0.1141)	-0.6403** (0.2136)	-0.6415*** (0.1192)
NH Other vs. NH White	-0.2974 (0.2071)	-0.2564 (0.1579)	-0.2581 (0.2062)
Hispanic vs. NH White	0.0347 (0.1267)	0.0978 (0.1606)	0.0975 (0.1246)
Female	0.2299* (0.0916)	0.2284** (0.0747)	0.2282* (0.0909)
Age 18-34 vs. 65+	-1.1931*** (0.1155)	-1.1787*** (0.1025)	-1.1795*** (0.1117)
Age 35-44 vs. 65+	-0.8215*** (0.0990)	-0.8088*** (0.1125)	-0.8095*** (0.1009)
Age 45-54 vs. 65+	-0.2626* (0.1088)	-0.2610* (0.1039)	-0.2609* (0.1099)
Age 55-64 vs. 65+	-0.0896 (0.0871)	-0.0886 (0.0983)	-0.0884 (0.0874)
% education Bachelor+, population 25+ y/o		-0.0117* (0.0048)	-0.0116** (0.0036)
Clinical care z-score, County Rankings		-1.8198** (0.6000)	-1.8129** (0.6030)
Myeloma Female Rate		0.0200* (0.0098)	0.0200* (0.0089)
Crude mortality rate of alzheimer-s disease per 10K		0.0142 (0.0524)	0.0155 (0.0476)
Non-stratified land domain index		0.2165** (0.0757)	0.2144*** (0.0602)
Violent crime rate, County Rankings/UCR		-0.0806 (0.0734)	-0.0798 (0.0528)
o.Crude mortality rate of alzheimer-s disease per 10K		0.0000	

c.CHR_violent_crime#c.rate_cod_alzheimersdisease		(.) 0.0311 (0.0279)	0.0308 (0.0216)
% Hispanic among adults 18 to 64		0.0107 (0.0138)	0.0108 (0.0109)
Esophagus Male Rate		0.0061 (0.0113)	0.0061 (0.0100)
c.ACS_pct_Hisp_18to64#c.EsophagusMaleRate		0.0007 (0.0022)	0.0007 (0.0023)
Intercept	0.8969*** (0.0978)	0.9709*** (0.2355)	0.9666*** (0.2218)
Area effect variance	0.0319 (0.0248)		0.0019 (0.0175)

Number of alternative models used to estimate model error = 11.

Results

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Augusta County	51015	55.8%	(42.1%, 68.6%)	69.1%	(65.1%, 72.8%)
Bath County	51017	65.4%	(29.7%, 89.5%)	66.1%	(59.0%, 72.5%)
Caroline County	51033	58.5%	(27.2%, 84.1%)	67.8%	(58.6%, 75.7%)
Clarke County	51043	60.2%	(27.9%, 85.6%)	69.1%	(62.2%, 75.3%)
Culpeper County	51047	64.2%	(43.8%, 80.5%)	72.3%	(65.9%, 77.9%)
Fauquier County	51061	63.1%	(44.0%, 78.8%)	69.9%	(62.9%, 76.0%)
Frederick County	51069	80.4%	(65.2%, 90.0%)	69.6%	(63.6%, 75.1%)
Highland County	51091	66.7%	(26.3%, 91.3%)	57.9%	(50.6%, 64.8%)
King George County	51099	65.2%	(28.8%, 89.6%)	64.5%	(57.0%, 71.4%)
Madison County	51113	88.4%	(57.0%, 96.4%)	72.1%	(64.7%, 78.5%)
Orange County	51137	79.0%	(56.0%, 91.7%)	72.8%	(68.9%, 76.3%)
Page County	51139	87.9%	(52.7%, 96.2%)	68.7%	(60.8%, 75.7%)
Rappahannock County	51157	67.2%	(30.4%, 90.5%)	59.8%	(54.6%, 64.8%)
Rockbridge County	51163	63.0%	(41.4%, 80.3%)	67.4%	(63.0%, 71.5%)
Rockingham County	51165	55.4%	(41.5%, 68.5%)	62.4%	(58.0%, 66.6%)
Shenandoah County	51171	63.8%	(43.1%, 80.3%)	65.7%	(60.5%, 70.5%)
Spotsylvania County	51177	46.1%	(33.3%, 59.5%)	61.1%	(57.7%, 64.3%)
Stafford County	51179	53.8%	(42.2%, 65.1%)	61.5%	(56.7%, 66.0%)
Warren County	51187	50.7%	(29.2%, 71.9%)	65.4%	(60.5%, 69.9%)
Buena Vista City	51530	16.3%	(4.1%, 67.3%)	68.7%	(62.2%, 74.6%)
Fredericksburg City	51630	42.5%	(20.9%, 67.5%)	55.9%	(49.4%, 62.2%)
Harrisonburg City	51660	45.9%	(13.6%, 82.1%)	62.9%	(53.7%, 71.2%)
Lexington City	51678	100.0%	(3.7%, 100.0%)	38.2%	(23.6%, 55.3%)
Staunton City	51790	92.9%	(47.9%, 97.9%)	76.4%	(68.7%, 82.7%)
Waynesboro City	51820	100.0%	(38.4%, 100.0%)	79.7%	(67.4%, 88.2%)
Winchester City	51840	59.6%	(14.9%, 92.6%)	68.3%	(62.6%, 73.5%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Albemarle County	51003	62.8%	(50.1%, 74.0%)	69.2%	(65.3%, 72.9%)
Alleghany County	51005	49.4%	(18.6%, 80.6%)	62.3%	(57.1%, 67.3%)
Amherst County	51009	57.9%	(34.8%, 78.0%)	66.3%	(62.6%, 69.8%)
Appomattox County	51011	68.8%	(41.2%, 87.4%)	63.8%	(59.6%, 67.7%)
Arlington City	51013	49.0%	(37.4%, 60.7%)	56.1%	(51.7%, 60.4%)
Bedford County	51019	60.8%	(47.8%, 72.4%)	67.7%	(64.3%, 71.0%)
Botetourt County	51023	69.9%	(47.2%, 85.8%)	72.1%	(66.9%, 76.8%)
Campbell County	51031	50.1%	(36.2%, 64.0%)	62.3%	(58.1%, 66.2%)
Craig County	51045	94.5%	(20.1%, 99.1%)	67.7%	(59.4%, 75.0%)
Fairfax County	51059	56.9%	(50.8%, 62.7%)	61.1%	(59.1%, 63.1%)
Fluvanna County	51065	65.2%	(38.8%, 84.7%)	69.3%	(64.8%, 73.5%)
Greene County	51079	38.9%	(14.9%, 69.7%)	62.7%	(56.1%, 68.9%)
Loudoun County	51107	58.2%	(48.8%, 66.9%)	63.9%	(61.2%, 66.4%)
Louisa County	51109	78.2%	(59.2%, 89.9%)	70.8%	(66.3%, 74.9%)
Nelson County	51125	56.3%	(27.0%, 81.8%)	66.7%	(62.1%, 71.0%)
Prince William County	51153	60.7%	(53.2%, 67.8%)	64.2%	(60.5%, 67.7%)
Roanoke County	51161	55.7%	(42.2%, 68.5%)	71.9%	(67.5%, 75.9%)
Alexandria City	51510	53.9%	(40.9%, 66.5%)	51.5%	(45.7%, 57.2%)
Charlottesville City	51540	54.7%	(29.1%, 78.0%)	61.9%	(56.0%, 67.5%)
Covington City	51580	0.0%	(0.0%, 99.4%)	66.2%	(58.4%, 73.2%)
Fairfax City	51600	50.4%	(36.4%, 64.3%)	56.0%	(49.7%, 62.1%)
Falls Church City	51610	60.9%	(32.6%, 83.4%)	65.1%	(58.7%, 71.0%)
Lynchburg City	51680	63.1%	(47.7%, 76.1%)	68.0%	(62.8%, 72.7%)
Manassas City	51683	48.3%	(19.7%, 78.1%)	61.5%	(52.5%, 69.9%)
Manassas Park City	51685	26.4%	(2.8%, 81.4%)	31.0%	(17.0%, 49.6%)
Salem City	51775	69.5%	(30.6%, 92.2%)	68.9%	(63.8%, 73.6%)

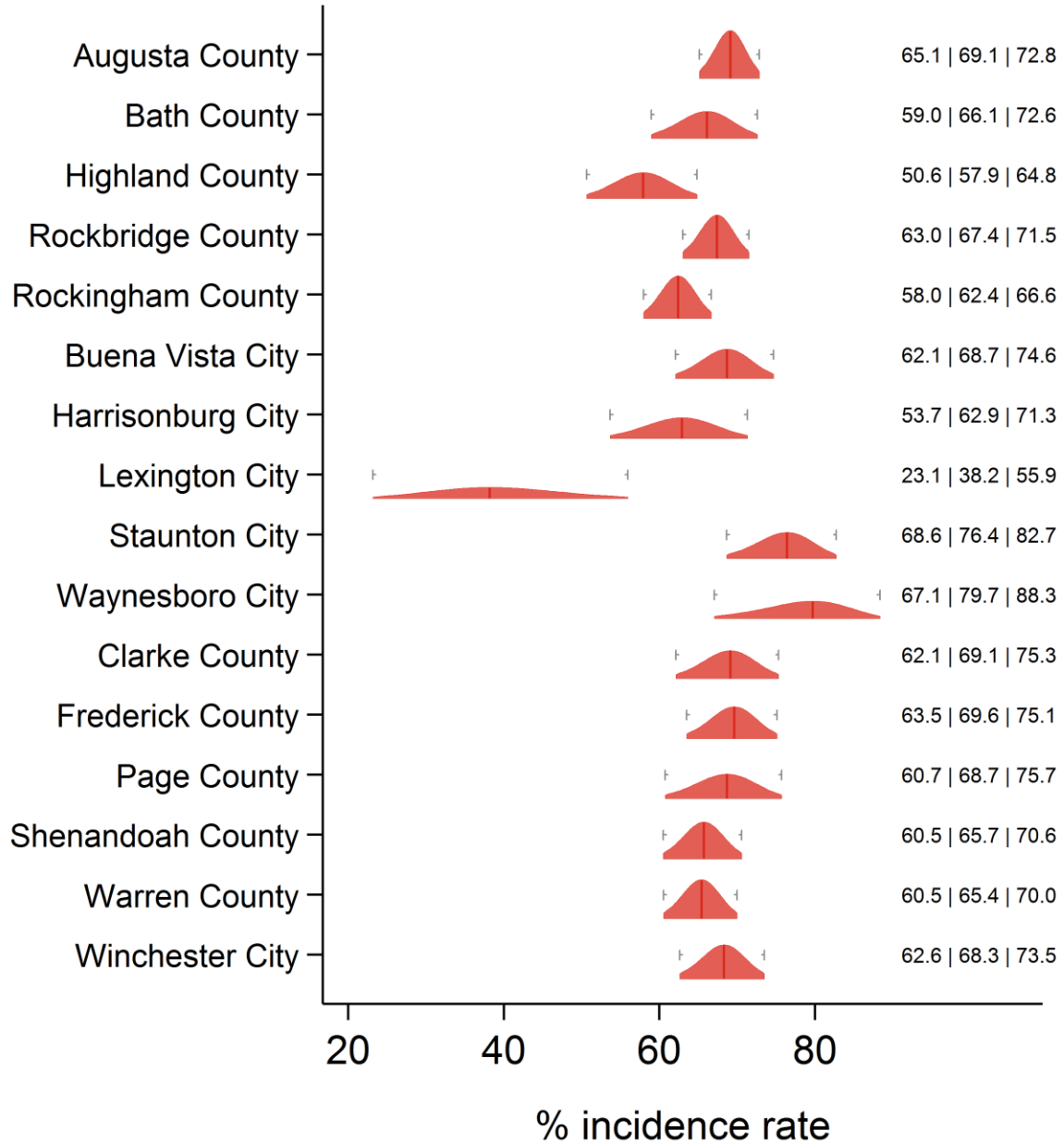
County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Bland County	51021	60.3%	(16.6%, 92.0%)	67.8%	(62.8%, 72.4%)
Buchanan County	51027	29.8%	(11.4%, 58.2%)	54.4%	(46.6%, 62.1%)
Carroll County	51035	69.0%	(44.2%, 86.2%)	67.6%	(62.8%, 72.1%)
Dickenson County	51051	59.5%	(35.0%, 80.0%)	60.3%	(54.9%, 65.4%)
Floyd County	51063	67.3%	(42.5%, 85.2%)	64.4%	(60.4%, 68.1%)
Franklin County	51067	71.1%	(48.9%, 86.3%)	70.6%	(66.5%, 74.4%)
Giles County	51071	57.6%	(36.5%, 76.2%)	64.4%	(59.7%, 68.9%)
Grayson County	51077	82.5%	(58.3%, 94.1%)	74.0%	(64.1%, 82.0%)
Henry County	51089	62.9%	(42.1%, 79.9%)	74.3%	(69.6%, 78.5%)
Lee County	51105	57.5%	(25.4%, 84.4%)	59.9%	(53.5%, 66.1%)
Montgomery County	51121	50.9%	(37.1%, 64.5%)	58.4%	(53.8%, 62.9%)
Patrick County	51141	65.6%	(23.2%, 92.3%)	67.6%	(63.1%, 71.8%)
Pittsylvania County	51143	68.5%	(55.9%, 78.9%)	69.0%	(64.3%, 73.4%)
Pulaski County	51155	66.8%	(38.9%, 86.3%)	64.8%	(60.5%, 68.8%)
Russell County	51167	56.4%	(34.7%, 76.0%)	65.1%	(59.3%, 70.5%)
Scott County	51169	73.6%	(52.0%, 87.8%)	68.6%	(63.7%, 73.1%)
Smyth County	51173	45.5%	(17.6%, 76.5%)	65.6%	(61.2%, 69.8%)
Tazewell County	51185	63.6%	(42.4%, 80.6%)	61.4%	(55.2%, 67.2%)
Washington County	51191	58.6%	(42.4%, 73.1%)	65.8%	(61.9%, 69.4%)
Wise County	51195	64.7%	(46.4%, 79.5%)	64.1%	(59.6%, 68.4%)
Wythe County	51197	53.4%	(31.1%, 74.4%)	69.6%	(64.1%, 74.5%)
Bristol City	51520	81.9%	(15.5%, 98.1%)	76.4%	(65.2%, 84.8%)
Danville City	51590	54.8%	(29.7%, 77.7%)	69.3%	(63.5%, 74.5%)
Galax City	51640	60.3%	(3.4%, 98.4%)	78.2%	(68.6%, 85.5%)
Martinsville City	51690	70.7%	(28.4%, 93.6%)	73.6%	(64.1%, 81.3%)
Norton City	51720	68.7%	(17.3%, 95.8%)	72.0%	(54.1%, 84.8%)
Radford City	51750	80.0%	(39.4%, 93.3%)	59.7%	(45.5%, 72.5%)
Roanoke City	51770	61.6%	(47.3%, 74.1%)	63.7%	(59.4%, 67.8%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Amelia County	51007	46.1%	(19.1%, 75.6%)	67.3%	(61.0%, 73.0%)
Brunswick County	51025	60.6%	(29.5%, 85.0%)	61.9%	(55.7%, 67.7%)
Buckingham County	51029	39.2%	(20.2%, 62.0%)	63.8%	(57.5%, 69.7%)
Charles City County	51036	87.0%	(33.1%, 97.6%)	64.8%	(54.6%, 73.9%)
Charlotte County	51037	71.1%	(50.6%, 85.5%)	77.8%	(70.2%, 83.8%)
Chesterfield County	51041	58.2%	(49.2%, 66.7%)	67.0%	(63.4%, 70.5%)
Cumberland County	51049	51.9%	(25.7%, 77.0%)	63.9%	(59.2%, 68.3%)
Dinwiddie County	51053	71.6%	(45.0%, 88.6%)	63.0%	(57.8%, 67.9%)
Goochland County	51075	90.6%	(62.5%, 95.5%)	75.5%	(69.2%, 80.9%)
Greensville County	51081	74.9%	(32.1%, 94.9%)	61.8%	(54.2%, 68.8%)
Halifax County	51083	59.7%	(39.4%, 77.1%)	64.4%	(59.4%, 69.1%)
Hanover County	51085	76.3%	(62.3%, 86.2%)	69.4%	(64.6%, 73.8%)
Henrico County	51087	55.9%	(45.7%, 65.7%)	64.2%	(60.7%, 67.5%)
Lunenburg County	51111	67.0%	(32.6%, 89.5%)	66.5%	(61.4%, 71.2%)
Mecklenburg County	51117	67.6%	(50.1%, 81.3%)	70.1%	(65.1%, 74.6%)
New Kent County	51127	87.3%	(54.6%, 97.5%)	65.3%	(60.4%, 69.9%)
Nottoway County	51135	78.4%	(44.7%, 94.2%)	71.1%	(64.9%, 76.6%)
Powhatan County	51145	37.6%	(16.9%, 64.2%)	70.0%	(65.1%, 74.5%)
Prince Edward County	51147	64.4%	(44.7%, 80.2%)	68.2%	(61.1%, 74.5%)
Prince George County	51149	59.9%	(38.2%, 78.3%)	64.2%	(57.6%, 70.3%)
Surry County	51181	52.0%	(19.0%, 83.3%)	65.7%	(60.7%, 70.4%)
Sussex County	51183	61.8%	(38.0%, 81.0%)	59.1%	(53.2%, 64.8%)
Colonial Heights City	51570	63.4%	(38.0%, 83.0%)	67.3%	(62.4%, 71.8%)
Emporia City	51595	100.0%	(0.6%, 100.0%)	57.0%	(42.3%, 70.5%)
Hopewell City	51670	50.4%	(24.4%, 76.2%)	57.3%	(50.4%, 63.9%)
Petersburg City	51730	62.7%	(42.3%, 79.3%)	66.1%	(59.6%, 72.0%)
Richmond City	51760	45.7%	(33.7%, 58.3%)	54.4%	(50.2%, 58.6%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Accomack County	51001	64.2%	(47.0%, 78.4%)	75.0%	(68.5%, 80.6%)
Essex County	51057	72.3%	(45.7%, 89.0%)	75.4%	(69.9%, 80.2%)
Gloucester County	51073	63.8%	(45.8%, 78.7%)	72.4%	(67.6%, 76.7%)
Isle of Wight County	51093	63.2%	(38.5%, 82.5%)	63.2%	(58.7%, 67.5%)
James City County	51095	61.2%	(46.5%, 74.1%)	67.1%	(61.1%, 72.5%)
King and Queen County	51097	40.3%	(12.6%, 76.0%)	69.1%	(61.8%, 75.5%)
King William County	51101	74.6%	(36.6%, 93.7%)	71.9%	(65.4%, 77.7%)
Lancaster County	51103	62.9%	(33.4%, 85.1%)	70.4%	(61.2%, 78.2%)
Mathews County	51115	55.5%	(27.4%, 80.5%)	71.1%	(59.9%, 80.2%)
Middlesex County	51119	61.8%	(34.3%, 83.4%)	74.5%	(68.3%, 79.8%)
Northampton County	51131	71.5%	(48.9%, 86.8%)	77.5%	(71.4%, 82.7%)
Northumberland County	51133	65.8%	(39.2%, 85.2%)	69.5%	(56.3%, 80.0%)
Richmond County	51159	53.2%	(25.2%, 79.4%)	68.4%	(62.4%, 73.9%)
Southampton County	51175	71.4%	(38.1%, 91.0%)	60.3%	(55.4%, 65.1%)
Westmoreland County	51193	73.6%	(42.4%, 91.3%)	68.9%	(61.0%, 75.9%)
York County	51199	74.3%	(56.1%, 86.8%)	63.8%	(57.5%, 69.6%)
Chesapeake City	51550	58.8%	(47.4%, 69.4%)	65.2%	(61.1%, 69.0%)
Franklin City	51620	71.9%	(45.3%, 88.8%)	74.2%	(62.6%, 83.2%)
Hampton City	51650	56.8%	(44.5%, 68.4%)	58.2%	(53.8%, 62.4%)
Newport News City	51700	44.6%	(33.0%, 56.8%)	57.5%	(53.3%, 61.6%)
Norfolk City	51710	51.4%	(41.1%, 61.5%)	54.4%	(50.7%, 58.1%)
Poquoson City	51735	26.9%	(3.0%, 86.8%)	57.4%	(50.3%, 64.3%)
Portsmouth City	51740	67.3%	(52.6%, 79.2%)	65.4%	(58.2%, 71.9%)
Suffolk City	51800	55.4%	(39.2%, 70.5%)	68.7%	(64.7%, 72.5%)
Virginia Beach City	51810	70.3%	(63.0%, 76.7%)	67.0%	(63.8%, 70.1%)
Williamsburg City	51830	4.7%	(0.7%, 84.7%)	71.3%	(40.8%, 90.0%)

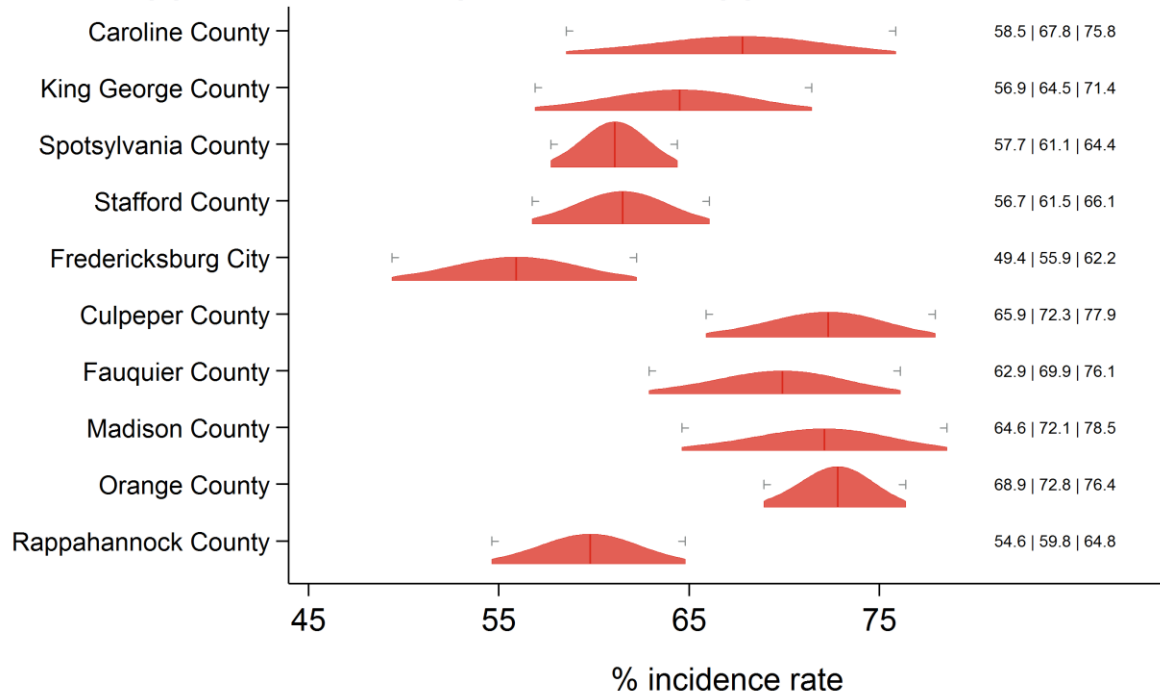
Graphical representation

Had a diabetes test past yr Central Shenandoah and Lord Fairfax HDs



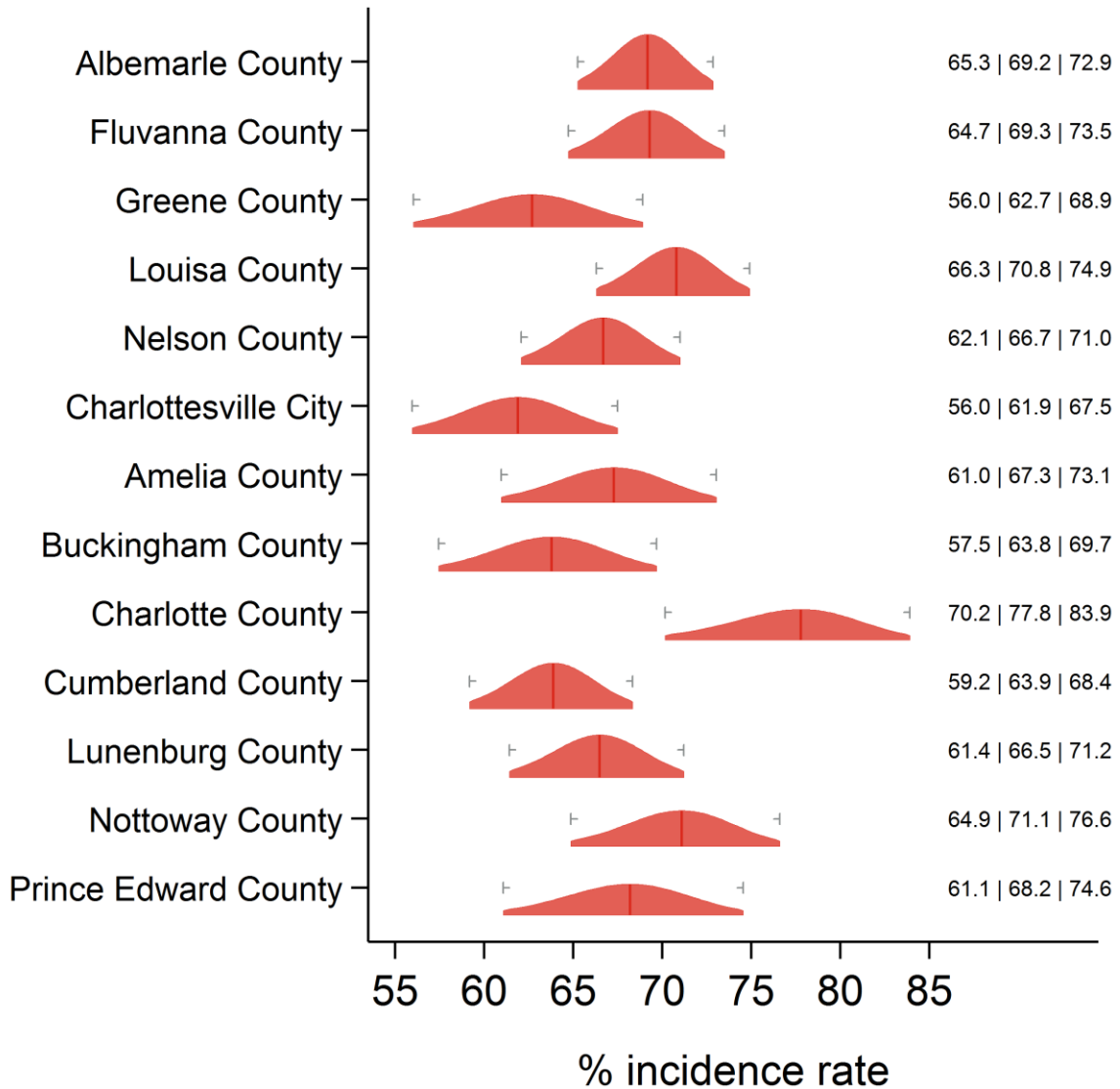
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Had a diabetes test past yr Rappahannock/Rapidan and Rappahannock HDs



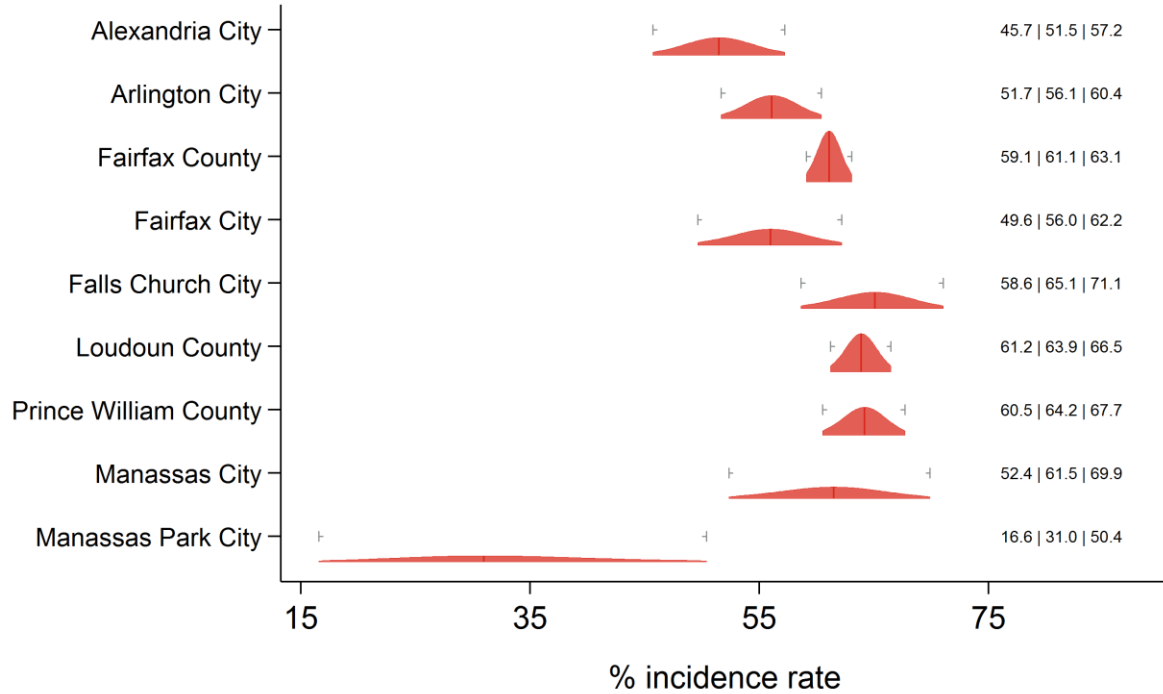
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Had a diabetes test past yr Thomas Jefferson and Piedmont HDs



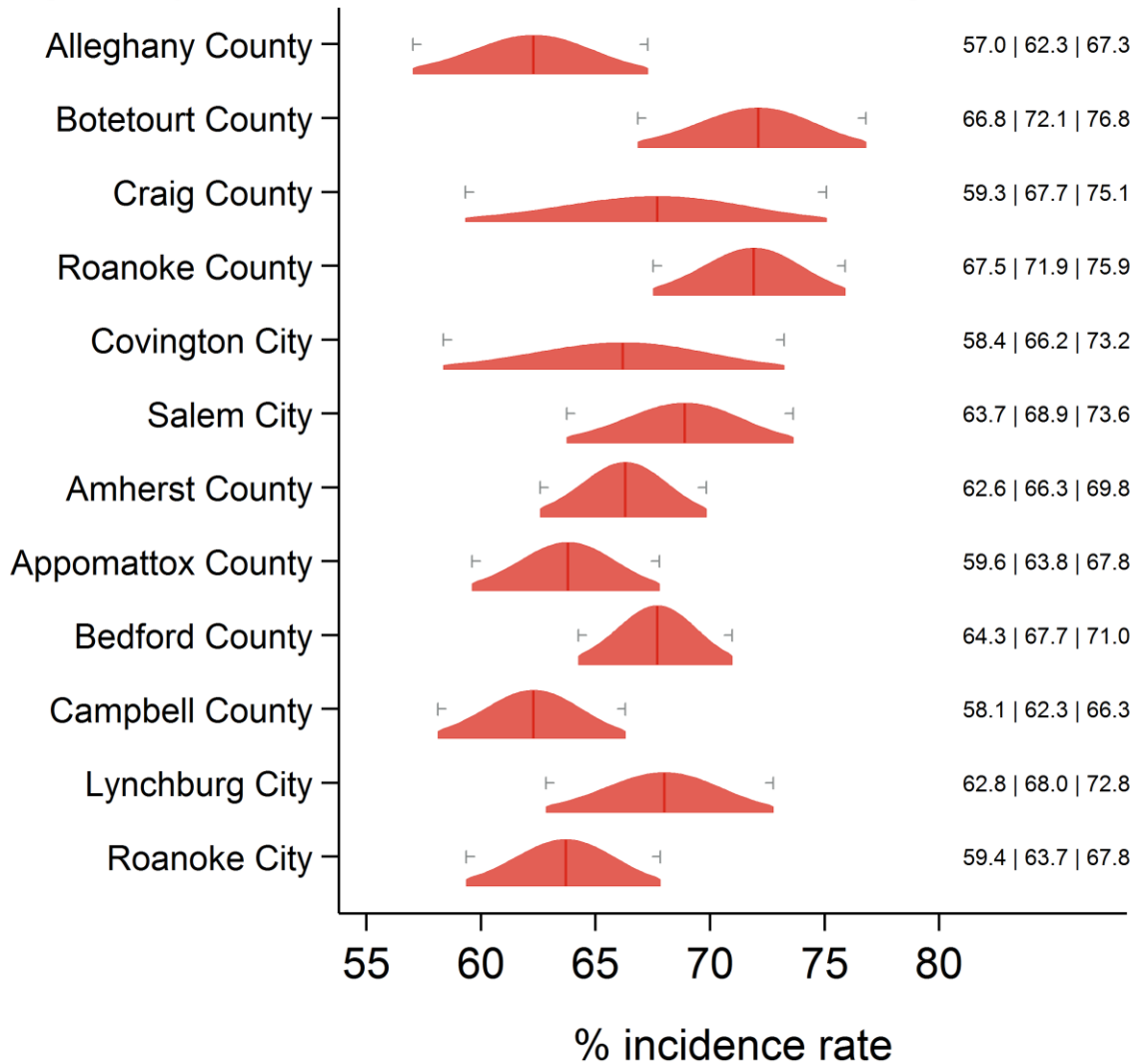
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Had a diabetes test past yr Alexandria, Fairfax, Arlington, Loudon, Prince William HDs



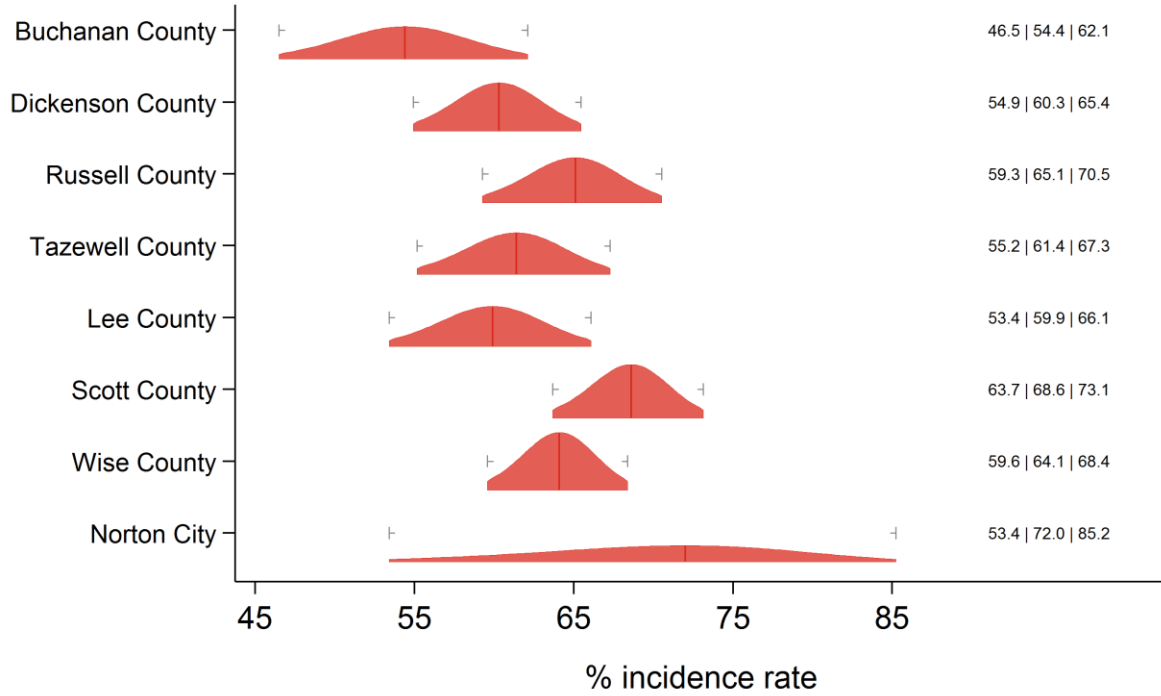
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Had a diabetes test past yr Alleghany, Roanoke and Central Virginia HDs



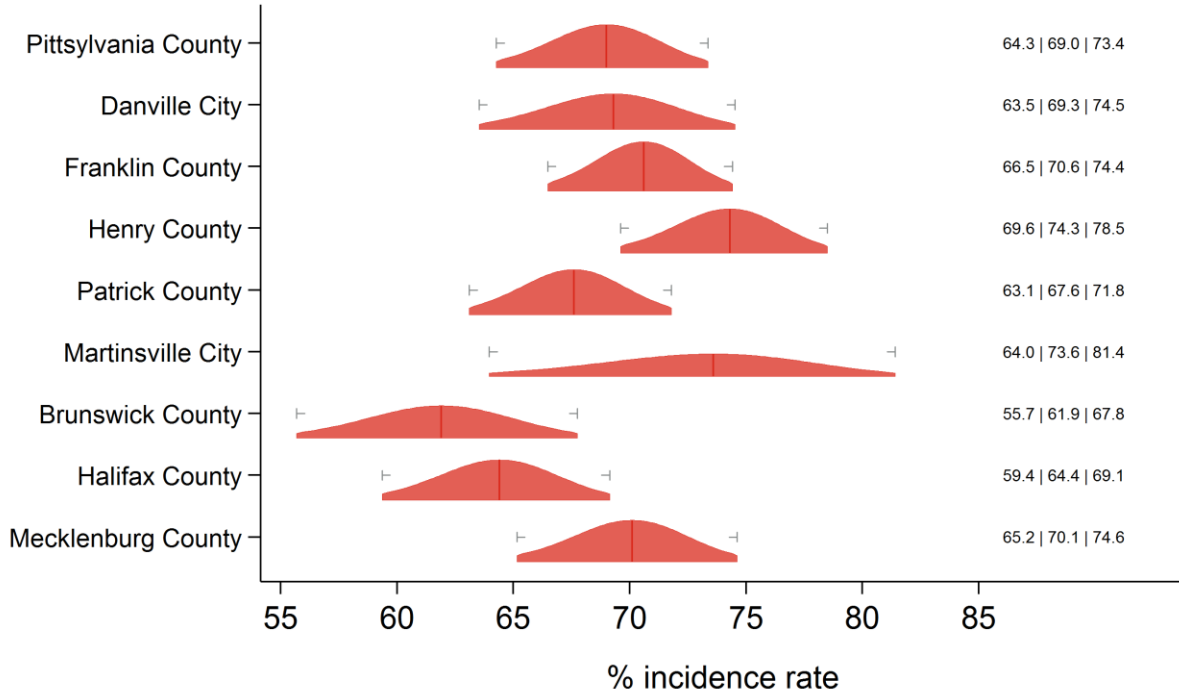
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Had a diabetes test past yr Cumberland Plateau and Lenowisco HDs



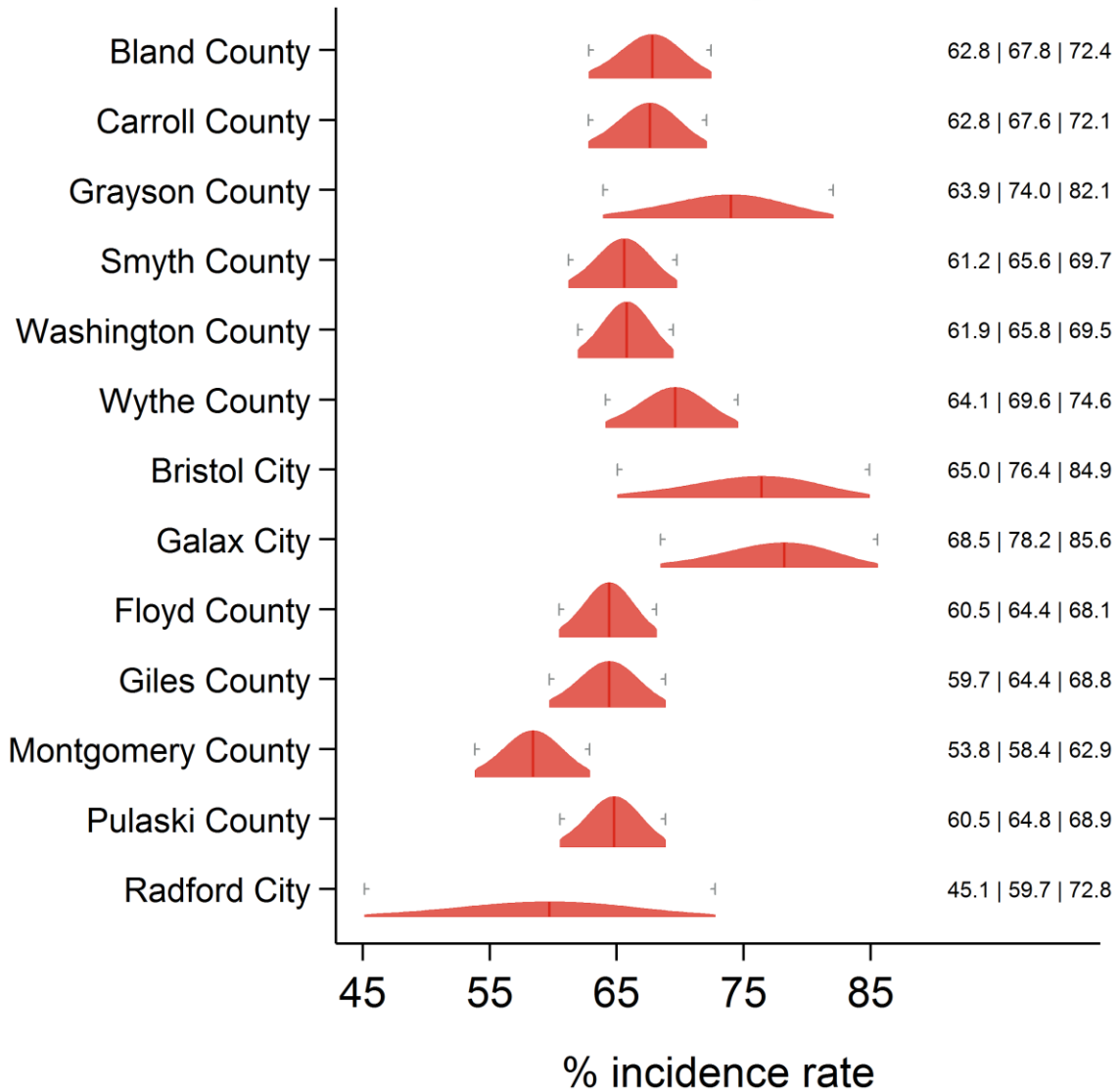
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Had a diabetes test past yr Pittsylvania/Danville, Southside and West Piedmont HDs



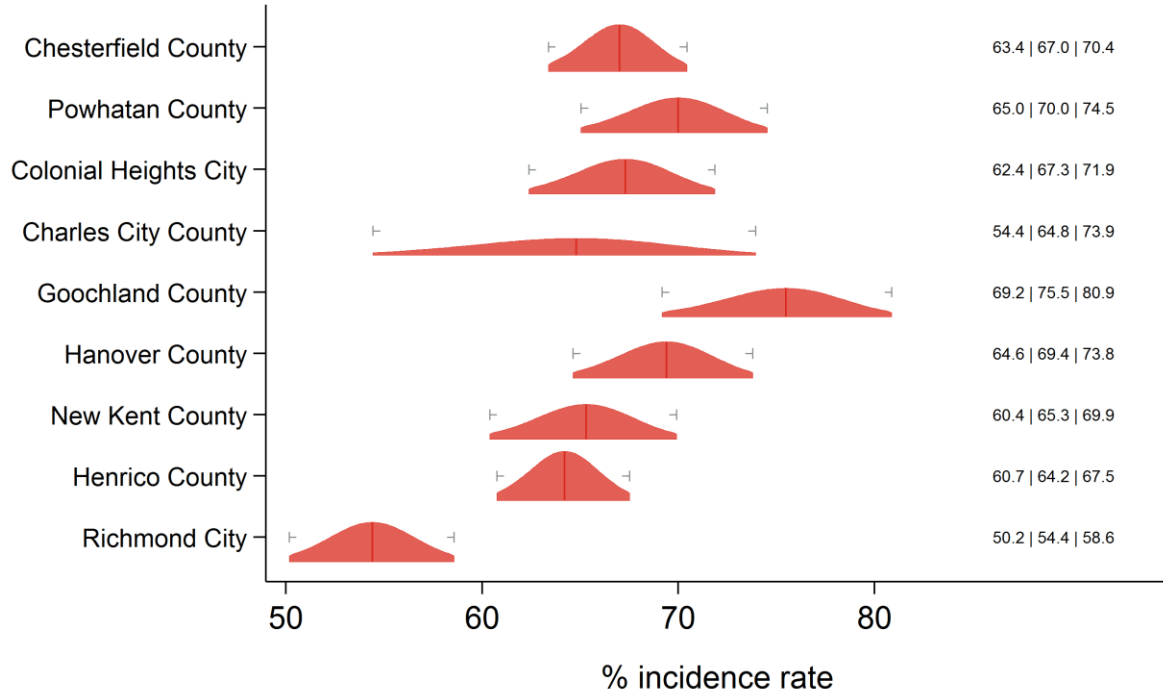
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Had a diabetes test past yr New River and Mount Rogers HDs



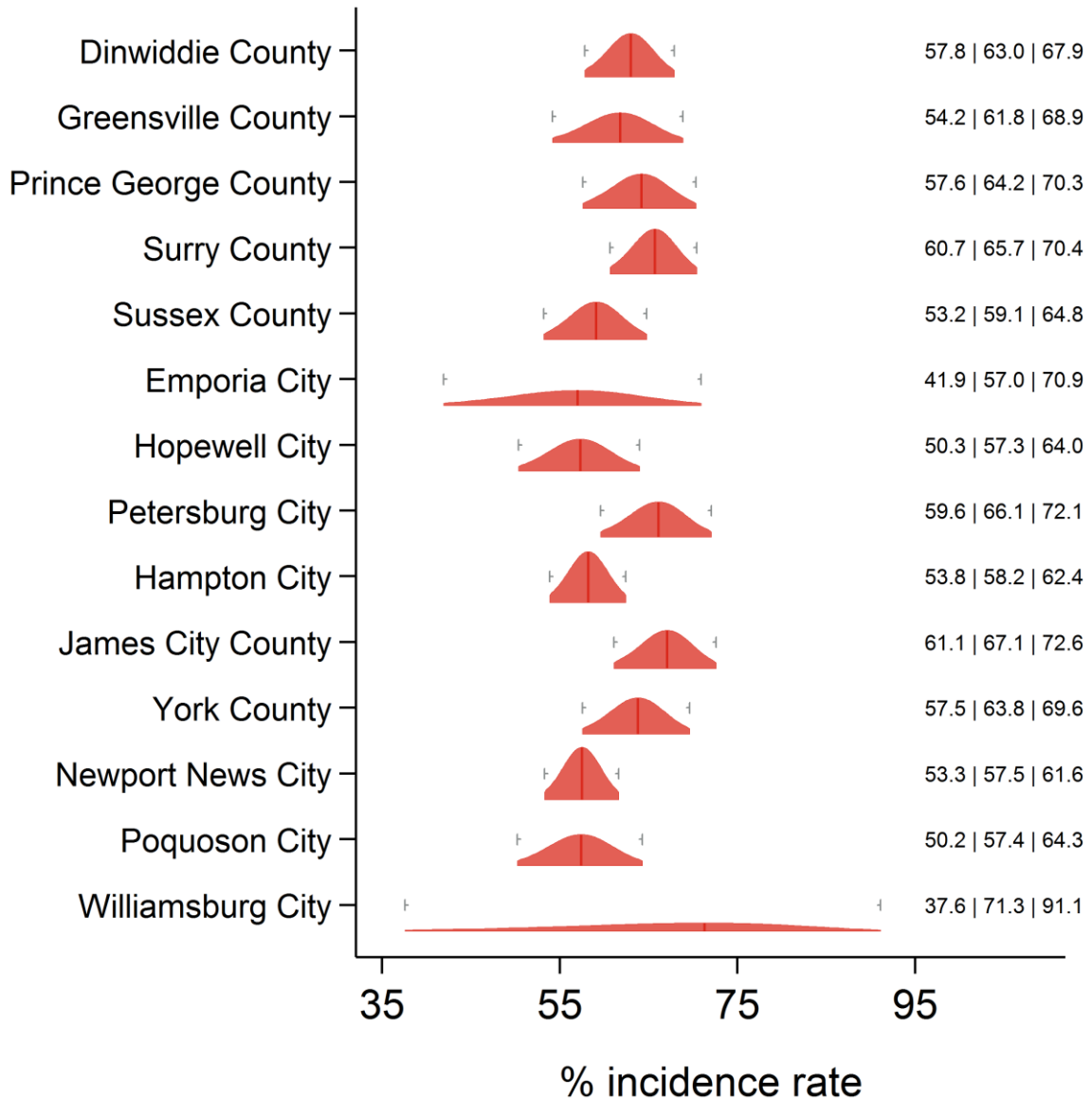
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Had a diabetes test past yr Chesterfield, Chickahominy, Henrico and Richmond HDs



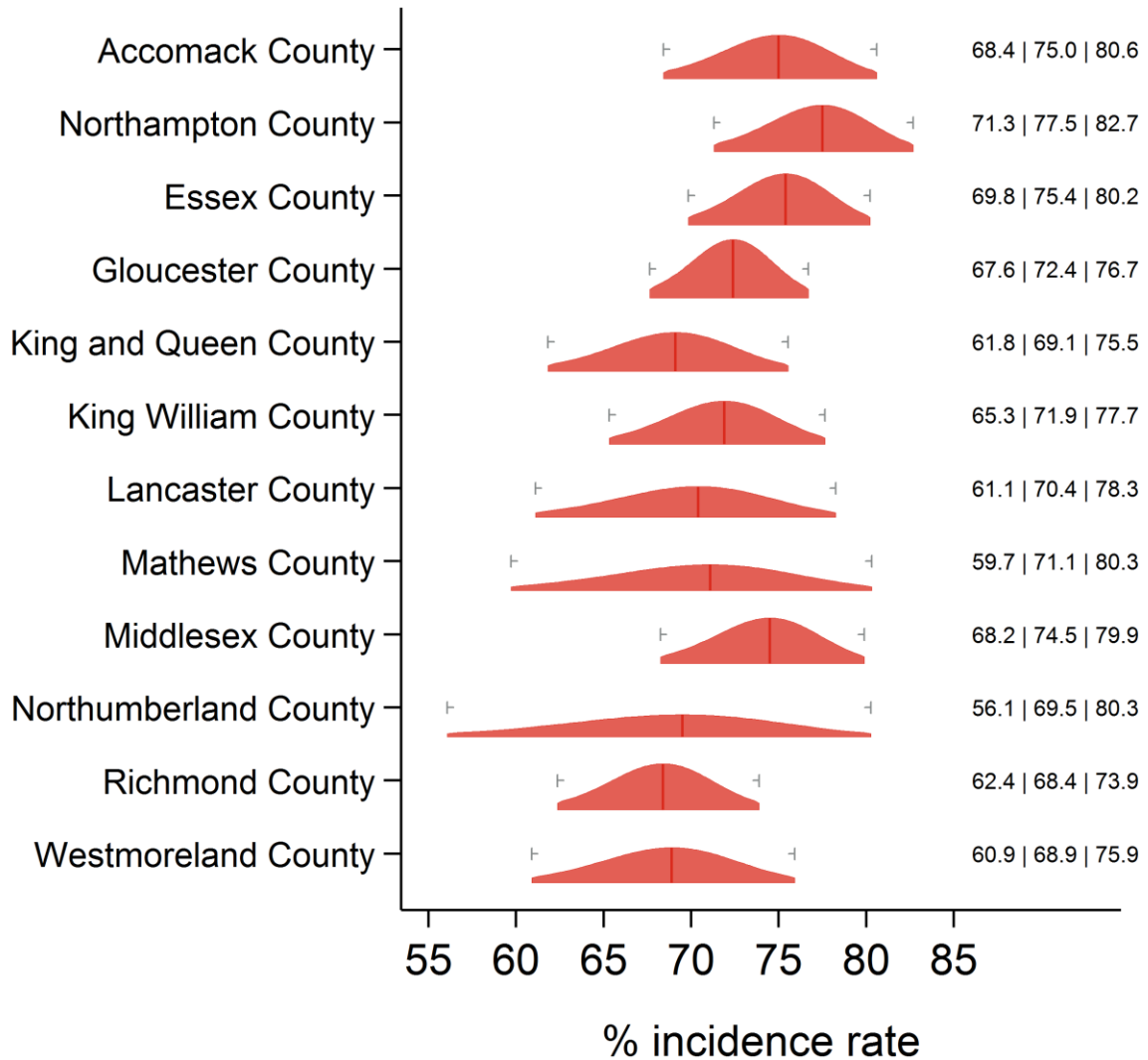
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Had a diabetes test past yr Crater, Peninsula and Hampton HDs



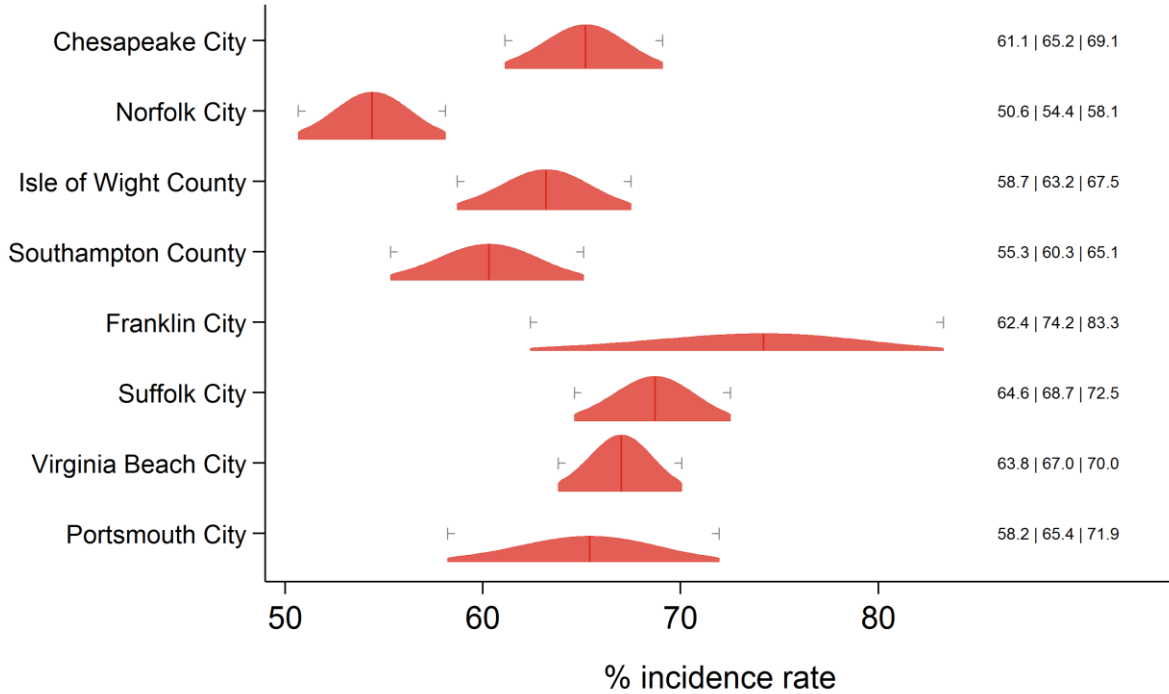
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Had a diabetes test past yr Eastern Shore and Three Rivers HDs



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

Had a diabetes test past yr 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

Additional diagnostics

Direct estimate is inside the 95% SAE Wilson CI: 50 areas.

Direct estimate is outside the 95% SAE Wilson CI: 83 areas.

SAE estimate is inside the 95% direct Wilson CI: 125 areas.

SAE estimate is outside the 95% direct Wilson CI: 8 areas.

SAE Wilson 95% CI is fully inside the 95% direct Wilson CI: 114 areas.

SAE Wilson 95% CI partially overlaps with the 95% direct Wilson CI: 19 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: 128 areas.

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

Direct standard error is zero: 4 areas.

Proportion of SAE variance due to ACS sampling error: min = 0.49%; med = 12.51%; max = 38.00%.

Proportion of SAE variance due to sampling error in regression coefficient estimates: min = 59.28%; med = 84.93%; max = 99.09%.

Proportion of SAE variance due to model selection: min = 0.07%; med = 0.95%; max = 8.12%.

Proportion of SAE variance due to area random effects: min = 0.02%; med = 0.56%; max = 2.53%.