

Outcome 7: Diagnosed with Diabetes

Internal variable name: outc7_diabetes_diag

Definition: (Ever told) you have diabetes

Predictive models

	Mixed, demos only	Logit, no area effects	Mixed with area covariates
	b/se	b/se	b/se
Outcome 7: Diagnosed with Diabetes			
NH White	0.0000 (.)	0.0000 (.)	0.0000 (.)
NH Black vs. NH White	0.8201*** (0.1229)	0.7714*** (0.1093)	0.7714*** (0.1197)
NH Asian vs. NH White	0.7703** (0.2544)	0.8555** (0.2826)	0.8556*** (0.2512)
NH Other vs. NH White	0.2548 (0.1448)	0.2638 (0.1878)	0.2636 (0.1497)
Hispanic vs. NH White	0.4054* (0.1906)	0.5026* (0.2159)	0.5028** (0.1836)
SEX OF RESPONDENT=1	0.0000 (.)	0.0000 (.)	0.0000 (.)
Female	-0.1381 (0.0941)	-0.1487 (0.0867)	-0.1487 (0.0956)
Age 18-34 vs. 65+	-3.4452*** (0.3247)	-3.4087*** (0.2977)	-3.4088*** (0.3240)
Age 35-44 vs. 65+	-1.9992*** (0.2259)	-1.9744*** (0.1799)	-1.9743*** (0.2250)
Age 45-54 vs. 65+	-1.1136*** (0.1284)	-1.0799*** (0.1352)	-1.0799*** (0.1260)
Age 55-64 vs. 65+	-0.3877** (0.1222)	-0.3784*** (0.1021)	-0.3784** (0.1244)
65+	0.0000 (.)	0.0000 (.)	0.0000 (.)
VA BRFSS 2014 SAE outc16_diabetes_diag		1.9331 (1.5485)	1.9356 (1.3624)
VA BRFSS 2014 SAE outc19_binge_drink		-2.3288 (1.3571)	-2.3264* (1.0970)
VA BRFSS 2014 SAE outc26_shingles_vacc		-0.9316	-0.9321

		(0.8337)	(0.7908)
Adult (20+) Obesity Rate, County Rankings/USDSS, 2016		0.0187	0.0187
		(0.0110)	(0.0128)
_cons	-1.2533***	-1.4106*	-1.4110*
	(0.0721)	(0.5579)	(0.5966)
Area effect variance			
var(_cons[FIPS_county])	0.0478		0.0000
	(0.0269)		(0.0000)

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

Results by health districts

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Augusta County	51015	12.3%	(7.5%, 19.6%)	15.5%	(14.0%, 17.1%)
Bath County	51017	26.1%	(6.4%, 64.7%)	10.4%	(7.0%, 15.1%)
Caroline County	51033	13.2%	(7.1%, 33.6%)	18.2%	(14.5%, 22.6%)
Clarke County	51043	4.9%	(1.4%, 30.4%)	12.3%	(11.0%, 13.7%)
Culpeper County	51047	20.4%	(9.0%, 39.8%)	14.6%	(13.3%, 16.0%)
Fauquier County	51061	9.3%	(3.8%, 20.7%)	13.6%	(12.3%, 15.0%)
Frederick County	51069	8.5%	(3.4%, 19.4%)	14.3%	(12.9%, 15.9%)
Highland County	51091	0.0%	(-0.0%, 49.0%)	7.9%	(5.3%, 11.5%)
King George County	51099	4.9%	(2.2%, 23.1%)	12.4%	(10.7%, 14.3%)
Madison County	51113	17.7%	(5.5%, 44.4%)	16.8%	(14.2%, 19.7%)
Orange County	51137	19.3%	(6.2%, 46.4%)	17.0%	(14.9%, 19.3%)
Page County	51139	18.2%	(6.3%, 42.4%)	15.9%	(13.4%, 18.8%)
Rappahannock County	51157	14.1%	(4.2%, 54.1%)	17.0%	(13.8%, 20.8%)
Rockbridge County	51163	13.1%	(5.3%, 28.9%)	13.0%	(11.2%, 15.2%)
Rockingham County	51165	7.3%	(5.2%, 16.6%)	10.7%	(9.7%, 11.7%)
Shenandoah County	51171	9.5%	(5.3%, 21.3%)	15.3%	(13.6%, 17.3%)
Spotsylvania County	51177	8.7%	(5.3%, 16.0%)	14.8%	(13.6%, 16.1%)
Stafford County	51179	14.4%	(8.3%, 23.9%)	13.4%	(11.3%, 15.8%)
Warren County	51187	10.8%	(3.6%, 28.3%)	15.0%	(13.0%, 17.1%)
Buena Vista City	51530	0.0%	(0.0%, 62.9%)	13.1%	(10.0%, 17.0%)
Fredericksburg City	51630	5.1%	(2.2%, 21.9%)	10.6%	(8.3%, 13.4%)
Harrisonburg City	51660	5.6%	(2.6%, 33.5%)	9.2%	(7.7%, 10.9%)
Lexington City	51678	100.0%	(0.6%, 100.0%)	8.9%	(6.5%, 11.9%)
Staunton City	51790	0.0%	(0.0%, 35.7%)	14.6%	(12.6%, 16.8%)
Waynesboro	51820	0.0%	(0.0%, 68.9%)	17.8%	(14.7%, 21.4%)

City					
Winchester City	51840	9.2%	(1.6%, 38.6%)	14.8%	(12.9%, 16.8%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Albemarle County	51003	5.6%	(3.8%, 12.1%)	9.5%	(8.2%, 11.1%)
Alleghany County	51005	7.0%	(3.5%, 22.5%)	18.8%	(16.7%, 21.1%)
Amherst County	51009	13.4%	(7.6%, 27.1%)	18.5%	(16.2%, 21.0%)
Appomattox County	51011	8.3%	(4.1%, 21.5%)	19.0%	(11.1%, 30.4%)
Arlington City	51013	5.2%	(2.9%, 9.3%)	6.9%	(5.5%, 8.5%)
Bedford County	51019	6.3%	(4.0%, 12.6%)	16.6%	(14.8%, 18.5%)
Botetourt County	51023	7.7%	(4.2%, 24.1%)	13.6%	(11.6%, 15.8%)
Campbell County	51031	11.4%	(6.2%, 20.2%)	15.0%	(13.4%, 16.7%)
Craig County	51045	11.9%	(3.7%, 58.9%)	14.5%	(12.4%, 16.8%)
Fairfax County	51059	7.7%	(5.5%, 10.8%)	12.4%	(10.8%, 14.2%)
Fluvanna County	51065	1.9%	(1.0%, 22.6%)	14.6%	(12.6%, 16.9%)
Greene County	51079	22.9%	(5.4%, 60.8%)	11.3%	(9.2%, 13.7%)
Loudoun County	51107	7.5%	(4.4%, 12.4%)	10.7%	(9.4%, 12.2%)
Louisa County	51109	8.8%	(4.3%, 26.3%)	15.9%	(14.1%, 17.9%)
Nelson County	51125	0.0%	(0.0%, 46.0%)	12.9%	(11.1%, 14.9%)
Prince William County	51153	9.7%	(6.7%, 13.9%)	14.5%	(13.1%, 16.1%)
Roanoke County	51161	20.4%	(13.9%, 29.0%)	14.6%	(13.1%, 16.3%)
Alexandria City	51510	5.6%	(2.7%, 11.4%)	9.2%	(7.7%, 10.9%)
Charlottesville City	51540	4.7%	(1.9%, 20.1%)	10.4%	(8.9%, 12.2%)
Covington City	51580	57.2%	(5.9%, 96.6%)	16.2%	(13.0%, 20.1%)
Fairfax City	51600	12.9%	(5.8%, 26.0%)	13.2%	(11.5%, 15.1%)
Falls Church City	51610	5.8%	(2.6%, 36.2%)	10.1%	(7.9%, 12.9%)
Lynchburg City	51680	6.7%	(4.0%, 15.3%)	13.5%	(11.6%, 15.8%)
Manassas City	51683	3.2%	(1.8%, 22.7%)	11.3%	(9.0%, 14.1%)
Manassas Park City	51685	7.1%	(2.0%, 56.5%)	10.3%	(6.1%, 17.0%)
Salem City	51775	6.2%	(2.4%, 52.7%)	14.0%	(12.1%, 16.2%)

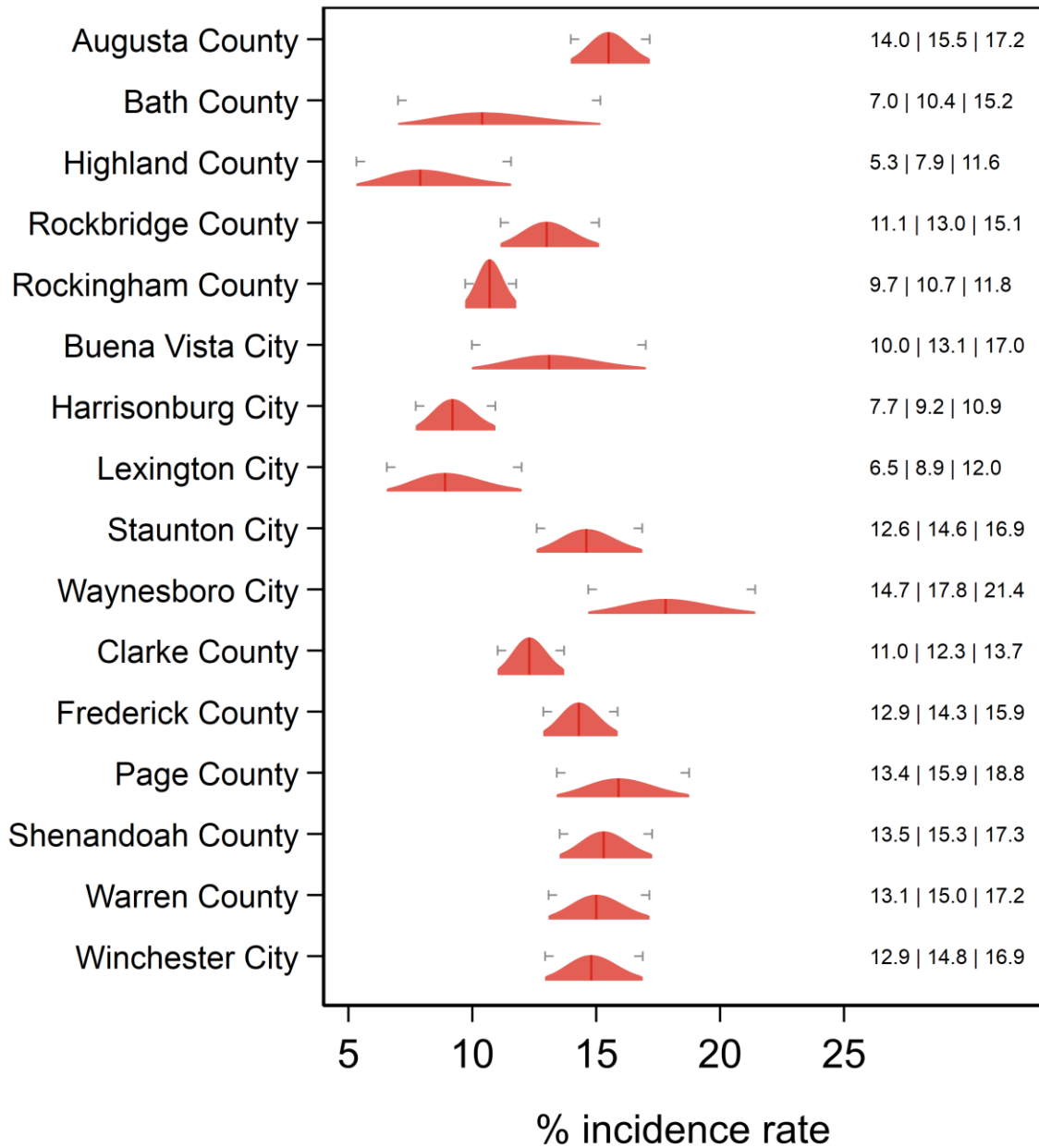
County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Bland County	51021	17.5%	(5.0%, 68.0%)	14.3%	(12.2%, 16.6%)
Buchanan County	51027	4.7%	(2.7%, 23.6%)	19.8%	(16.1%, 24.1%)
Carroll County	51035	0.9%	(0.6%, 22.3%)	18.4%	(15.1%, 22.2%)
Dickenson County	51051	10.2%	(3.9%, 33.0%)	16.5%	(12.3%, 21.7%)
Floyd County	51063	6.9%	(1.1%, 33.2%)	9.7%	(8.3%, 11.3%)
Franklin County	51067	5.1%	(2.8%, 15.3%)	16.4%	(14.7%, 18.3%)
Giles County	51071	16.6%	(5.3%, 41.3%)	11.6%	(10.2%, 13.2%)
Grayson County	51077	18.2%	(5.7%, 44.9%)	16.6%	(14.8%, 18.6%)
Henry County	51089	25.8%	(16.1%, 38.6%)	23.2%	(19.8%, 27.1%)
Lee County	51105	25.0%	(10.4%, 48.7%)	19.9%	(17.1%, 23.2%)
Montgomery County	51121	8.1%	(4.4%, 14.5%)	7.7%	(6.3%, 9.4%)
Patrick County	51141	30.7%	(14.1%, 54.6%)	20.8%	(14.8%, 28.4%)
Pittsylvania County	51143	14.6%	(8.6%, 23.6%)	23.2%	(20.5%, 26.0%)
Pulaski County	51155	4.3%	(2.7%, 17.5%)	12.1%	(10.2%, 14.2%)
Russell County	51167	18.3%	(8.8%, 34.0%)	19.8%	(17.0%, 22.8%)
Scott County	51169	28.4%	(15.8%, 45.6%)	17.6%	(14.4%, 21.2%)
Smyth County	51173	21.0%	(10.3%, 38.0%)	17.0%	(15.0%, 19.3%)
Tazewell County	51185	16.1%	(8.8%, 27.5%)	18.4%	(15.4%, 21.9%)
Washington County	51191	14.9%	(7.8%, 26.6%)	16.7%	(14.4%, 19.2%)
Wise County	51195	13.9%	(7.7%, 23.7%)	19.3%	(16.4%, 22.6%)
Wythe County	51197	16.1%	(7.2%, 32.4%)	18.7%	(16.6%, 21.1%)
Bristol City	51520	3.8%	(1.3%, 57.2%)	17.8%	(14.1%, 22.1%)
Danville City	51590	30.6%	(11.2%, 60.7%)	21.8%	(17.3%, 27.1%)
Galax City	51640	0.0%	(-0.0%, 92.2%)	11.9%	(9.9%, 14.3%)
Martinsville City	51690	11.1%	(3.7%, 50.5%)	22.0%	(16.7%, 28.4%)
Norton City	51720	12.0%	(0.5%, 94.9%)	13.4%	(10.8%, 16.5%)
Radford City	51750	5.4%	(0.9%, 26.9%)	9.7%	(7.7%, 12.3%)
Roanoke City	51770	11.1%	(5.5%, 21.0%)	16.2%	(14.6%, 17.9%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Amelia County	51007	30.0%	(7.8%, 68.4%)	23.6%	(20.5%, 27.1%)
Brunswick County	51025	22.3%	(9.2%, 44.8%)	23.7%	(20.4%, 27.4%)
Buckingham County	51029	4.9%	(2.6%, 30.0%)	24.3%	(21.5%, 27.4%)
Charles City County	51036	13.0%	(2.0%, 82.1%)	18.2%	(15.6%, 21.1%)
Charlotte County	51037	15.1%	(7.7%, 38.1%)	23.3%	(20.6%, 26.3%)
Chesterfield County	51041	13.5%	(9.5%, 19.0%)	15.4%	(14.0%, 17.0%)
Cumberland County	51049	7.1%	(3.3%, 37.0%)	23.9%	(21.0%, 27.0%)
Dinwiddie County	51053	14.3%	(4.0%, 39.8%)	21.9%	(18.9%, 25.1%)
Goochland County	51075	9.7%	(2.9%, 27.9%)	13.8%	(12.4%, 15.4%)
Greensville County	51081	35.3%	(11.7%, 69.1%)	24.8%	(20.4%, 29.7%)
Halifax County	51083	20.8%	(11.3%, 35.1%)	25.5%	(22.0%, 29.3%)
Hanover County	51085	13.7%	(7.0%, 25.0%)	15.0%	(13.6%, 16.5%)
Henrico County	51087	10.9%	(6.8%, 16.9%)	16.8%	(15.3%, 18.4%)
Lunenburg County	51111	26.5%	(10.9%, 51.7%)	23.7%	(20.8%, 26.9%)
Mecklenburg County	51117	22.1%	(12.9%, 35.4%)	23.7%	(20.4%, 27.3%)
New Kent County	51127	8.5%	(2.5%, 25.7%)	15.7%	(14.0%, 17.5%)
Nottoway County	51135	17.6%	(7.0%, 37.7%)	21.5%	(18.4%, 25.0%)
Powhatan County	51145	8.1%	(1.8%, 30.0%)	16.2%	(13.6%, 19.2%)
Prince Edward County	51147	25.4%	(10.7%, 49.0%)	19.7%	(17.0%, 22.8%)
Prince George County	51149	16.0%	(6.1%, 35.9%)	20.2%	(17.1%, 23.6%)
Surry County	51181	4.5%	(1.6%, 51.8%)	16.2%	(13.4%, 19.4%)
Sussex County	51183	10.1%	(2.6%, 32.1%)	24.8%	(21.3%, 28.7%)
Colonial Heights City	51570	7.3%	(1.7%, 26.7%)	19.4%	(15.7%, 23.8%)
Emporia City	51595	8.8%	(1.5%, 77.8%)	19.8%	(15.2%, 25.2%)
Hopewell City	51670	5.6%	(3.4%, 31.9%)	21.1%	(15.0%, 28.8%)
Petersburg	51730	12.5%	(5.8%, 25.0%)	20.0%	(16.5%, 24.0%)

City					
Richmond City	51760	9.9%	(5.9%, 16.2%)	13.5%	(11.6%, 15.8%)

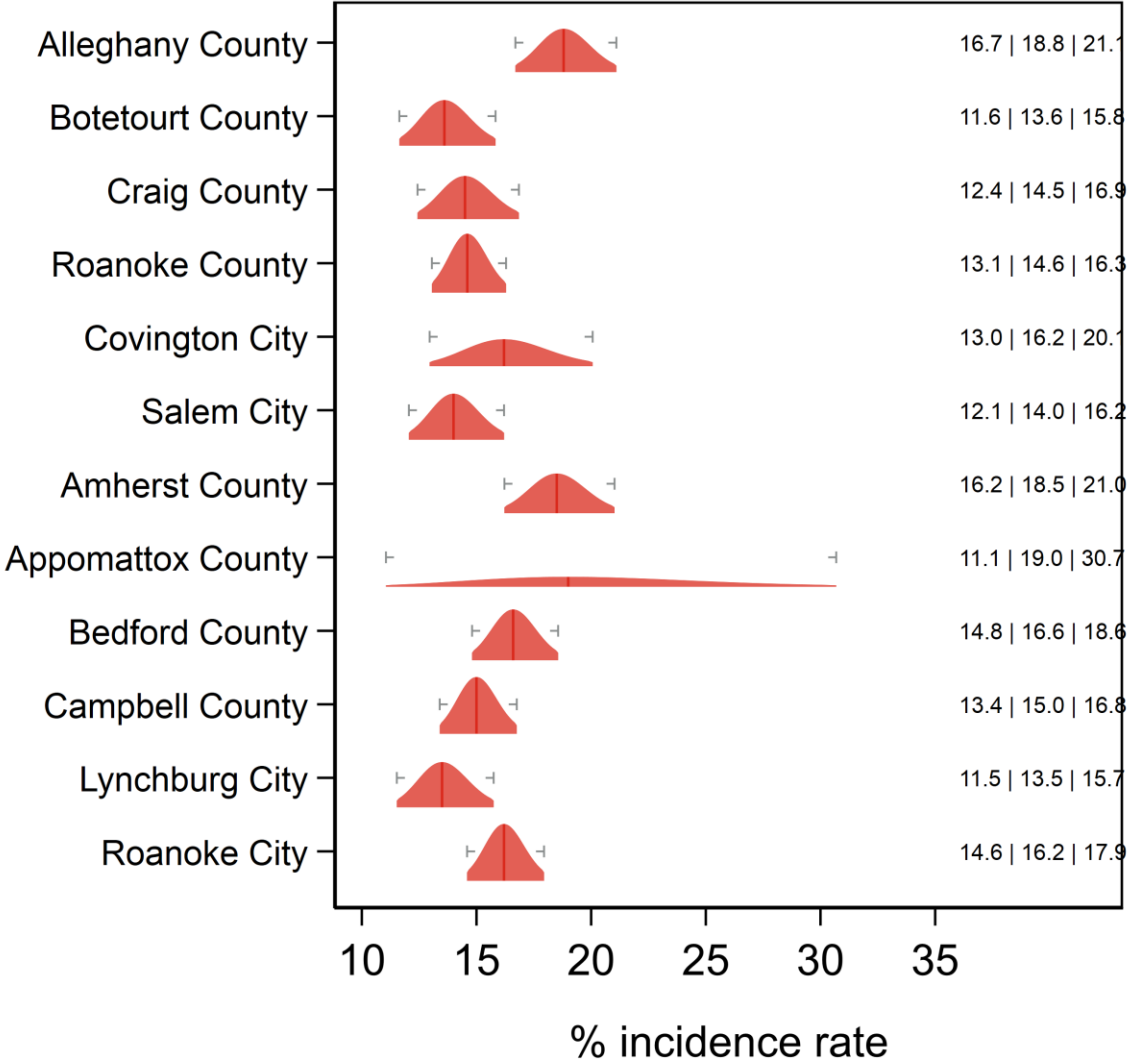
County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Accomack County	51001	11.3%	(5.4%, 22.1%)	21.5%	(18.2%, 25.2%)
Essex County	51057	20.4%	(8.2%, 42.5%)	22.3%	(18.8%, 26.3%)
Gloucester County	51073	9.4%	(3.7%, 21.8%)	18.5%	(16.9%, 20.2%)
Isle of Wight County	51093	18.2%	(7.6%, 37.6%)	20.0%	(17.4%, 23.0%)
James City County	51095	16.5%	(9.2%, 28.0%)	13.0%	(11.5%, 14.6%)
King and Queen County	51097	28.1%	(3.7%, 80.0%)	25.9%	(18.8%, 34.5%)
King William County	51101	2.3%	(1.2%, 37.9%)	14.4%	(13.0%, 16.0%)
Lancaster County	51103	2.6%	(1.6%, 22.3%)	20.2%	(16.6%, 24.4%)
Mathews County	51115	16.5%	(4.7%, 44.2%)	14.2%	(11.6%, 17.3%)
Middlesex County	51119	4.2%	(2.2%, 30.6%)	15.7%	(13.3%, 18.6%)
Northampton County	51131	30.4%	(14.3%, 53.3%)	21.1%	(17.5%, 25.3%)
Northumberland County	51133	27.3%	(11.6%, 51.7%)	20.6%	(14.5%, 28.4%)
Richmond County	51159	9.8%	(3.2%, 26.2%)	20.9%	(17.0%, 25.5%)
Southampton County	51175	14.5%	(7.1%, 36.6%)	24.8%	(20.6%, 29.6%)
Westmoreland County	51193	15.3%	(5.5%, 36.0%)	21.2%	(18.1%, 24.8%)
York County	51199	8.5%	(4.7%, 19.2%)	11.8%	(10.3%, 13.5%)
Chesapeake City	51550	20.5%	(14.8%, 27.5%)	16.8%	(14.7%, 19.2%)
Franklin City	51620	37.9%	(9.7%, 77.5%)	26.6%	(21.0%, 33.2%)
Hampton City	51650	11.1%	(7.6%, 17.4%)	20.4%	(18.1%, 22.9%)
Newport News City	51700	10.5%	(6.2%, 17.2%)	16.0%	(14.4%, 17.8%)
Norfolk City	51710	11.1%	(7.2%, 16.7%)	13.6%	(12.1%, 15.4%)
Poquoson City	51735	0.0%	(0.0%, 40.5%)	16.4%	(12.5%, 21.0%)
Portsmouth City	51740	23.3%	(14.6%, 35.2%)	21.6%	(19.1%, 24.2%)
Suffolk City	51800	12.3%	(6.9%, 20.9%)	19.0%	(17.2%, 20.9%)
Virginia Beach City	51810	10.1%	(7.4%, 13.8%)	12.5%	(11.5%, 13.6%)
Williamsburg City	51830	3.3%	(1.7%, 39.2%)	10.1%	(5.9%, 16.8%)

Diagnosed with Diabetes Central Shenandoah and Lord Fairfax HDs



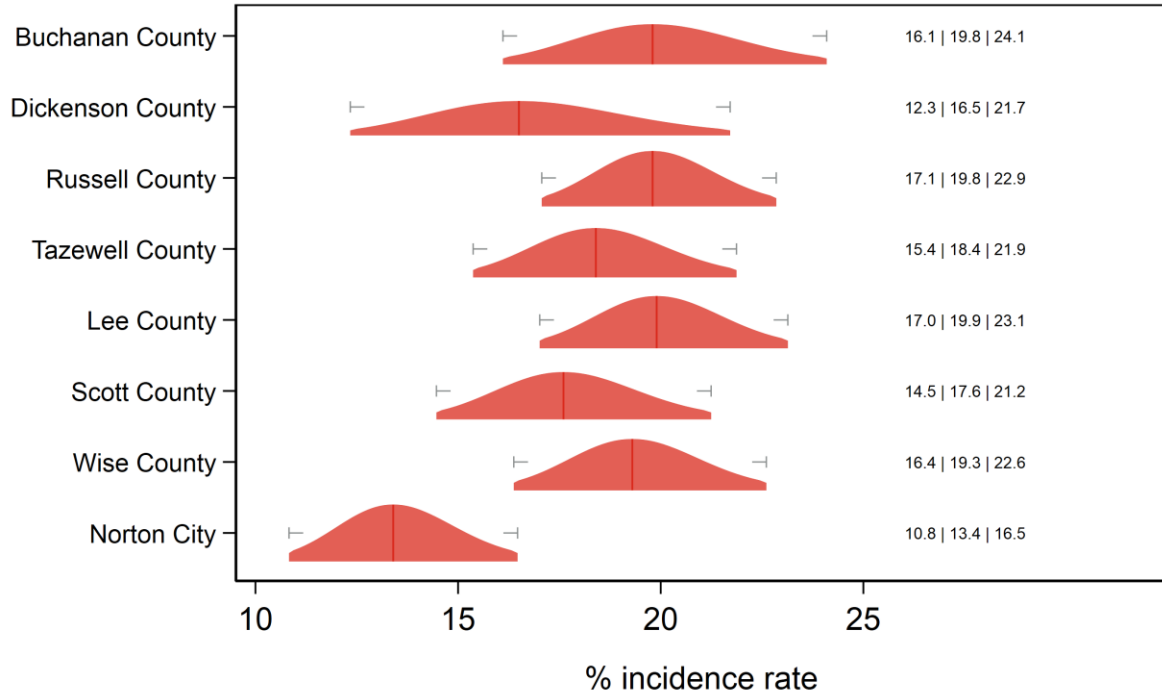
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
Gray markers: 95% confidence interval

Diagnosed with Diabetes Alleghany, Roanoke and Central Virginia HDs



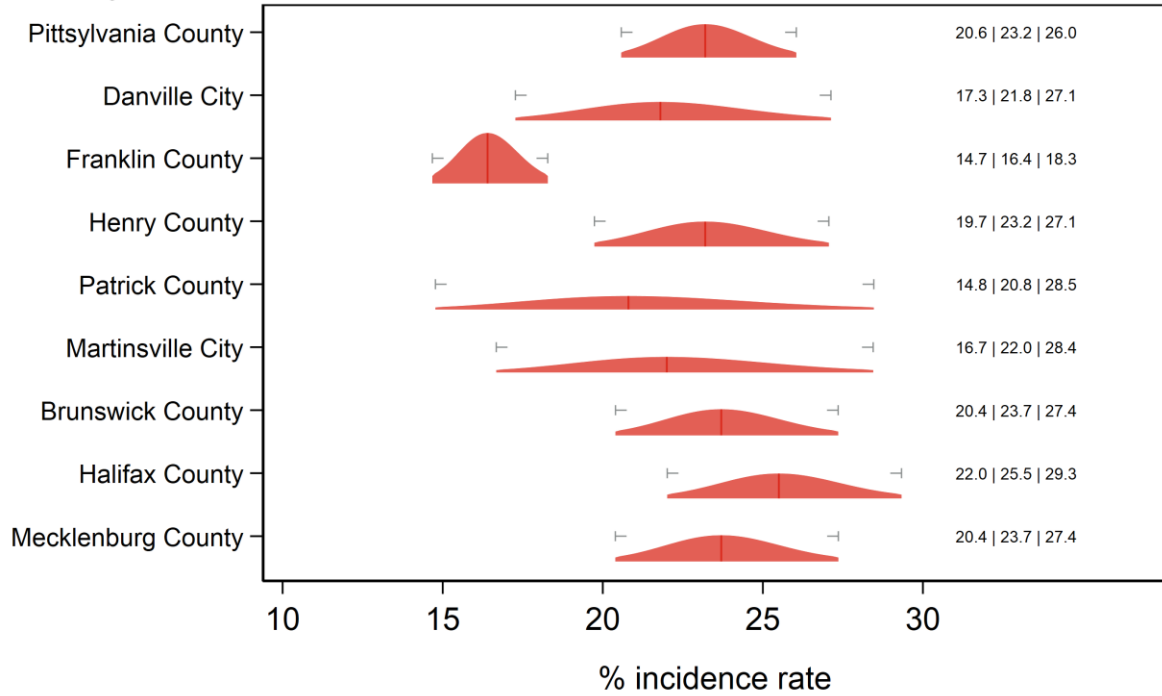
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Diagnosed with Diabetes Cumberland Plateau and Lenowisco HDs



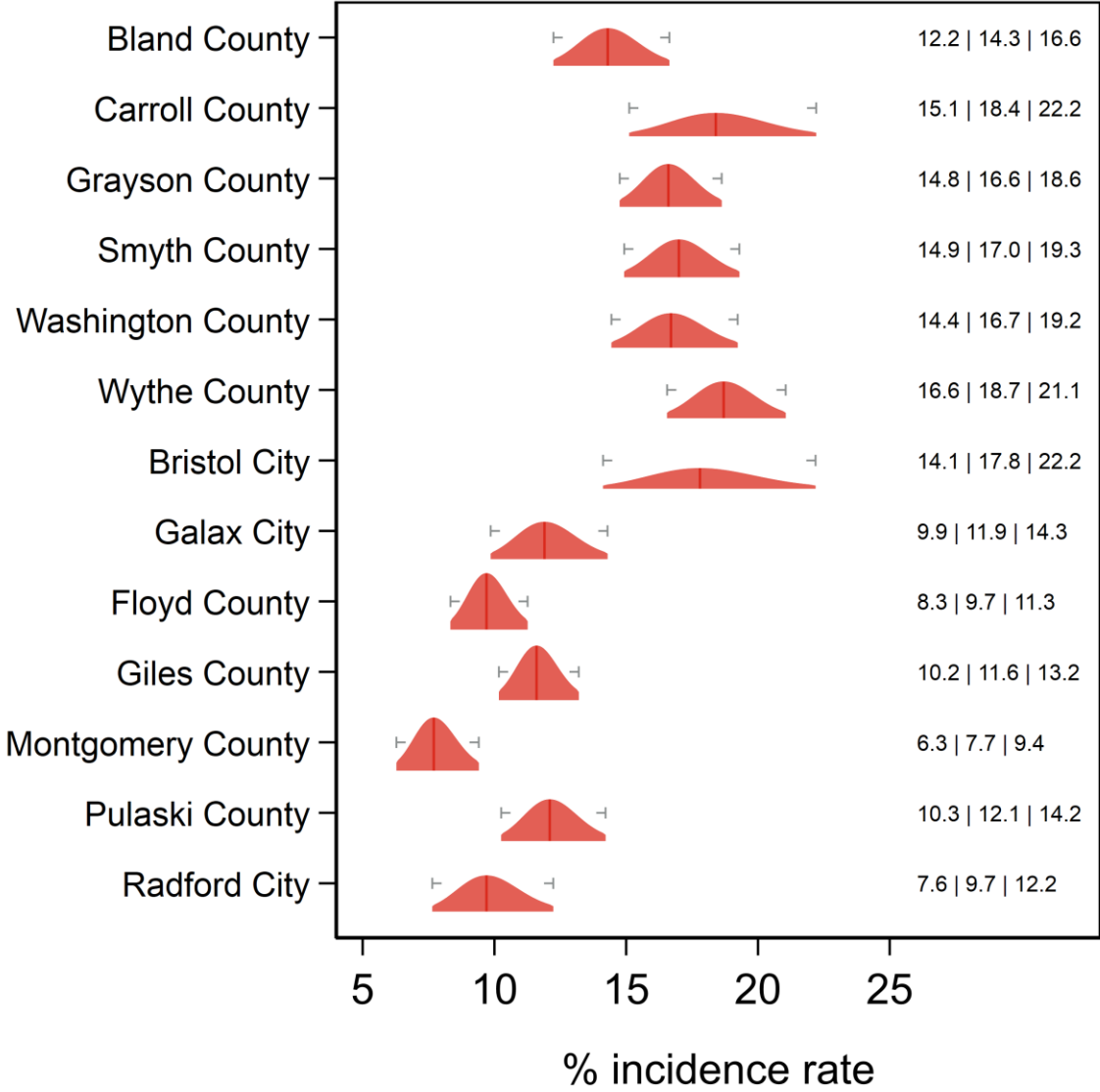
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Diagnosed with Diabetes Pittsylvania/Danville, Southside and West Piedmont HDs



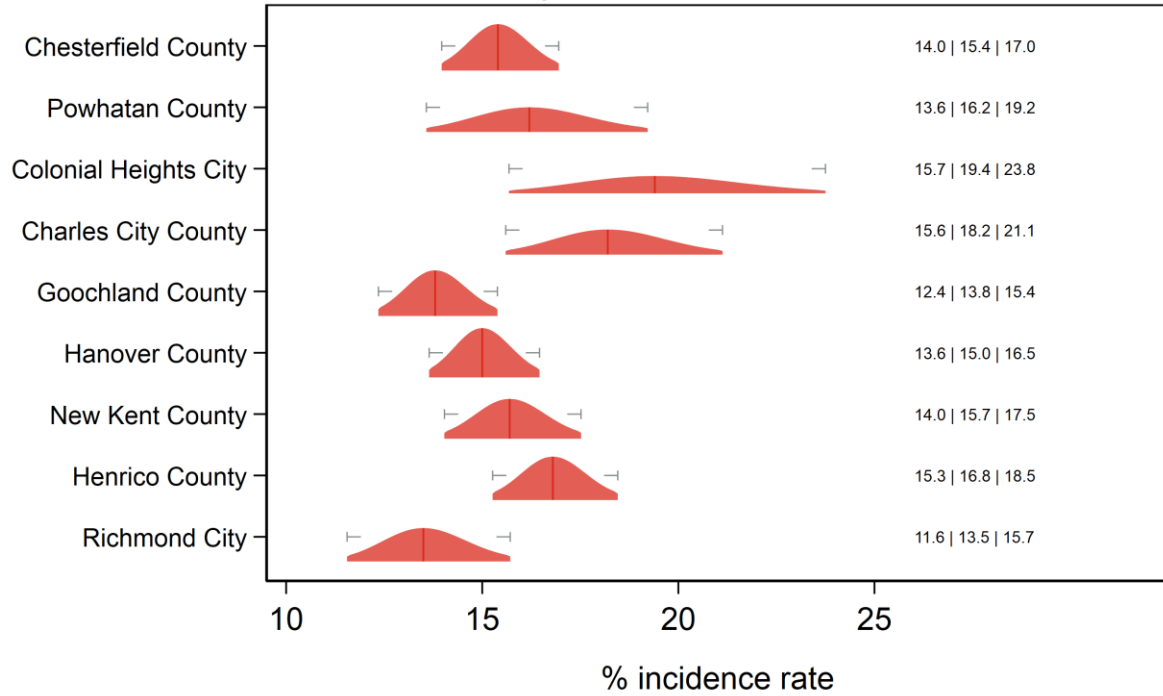
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Diagnosed with Diabetes New River and Mount Rogers HDs



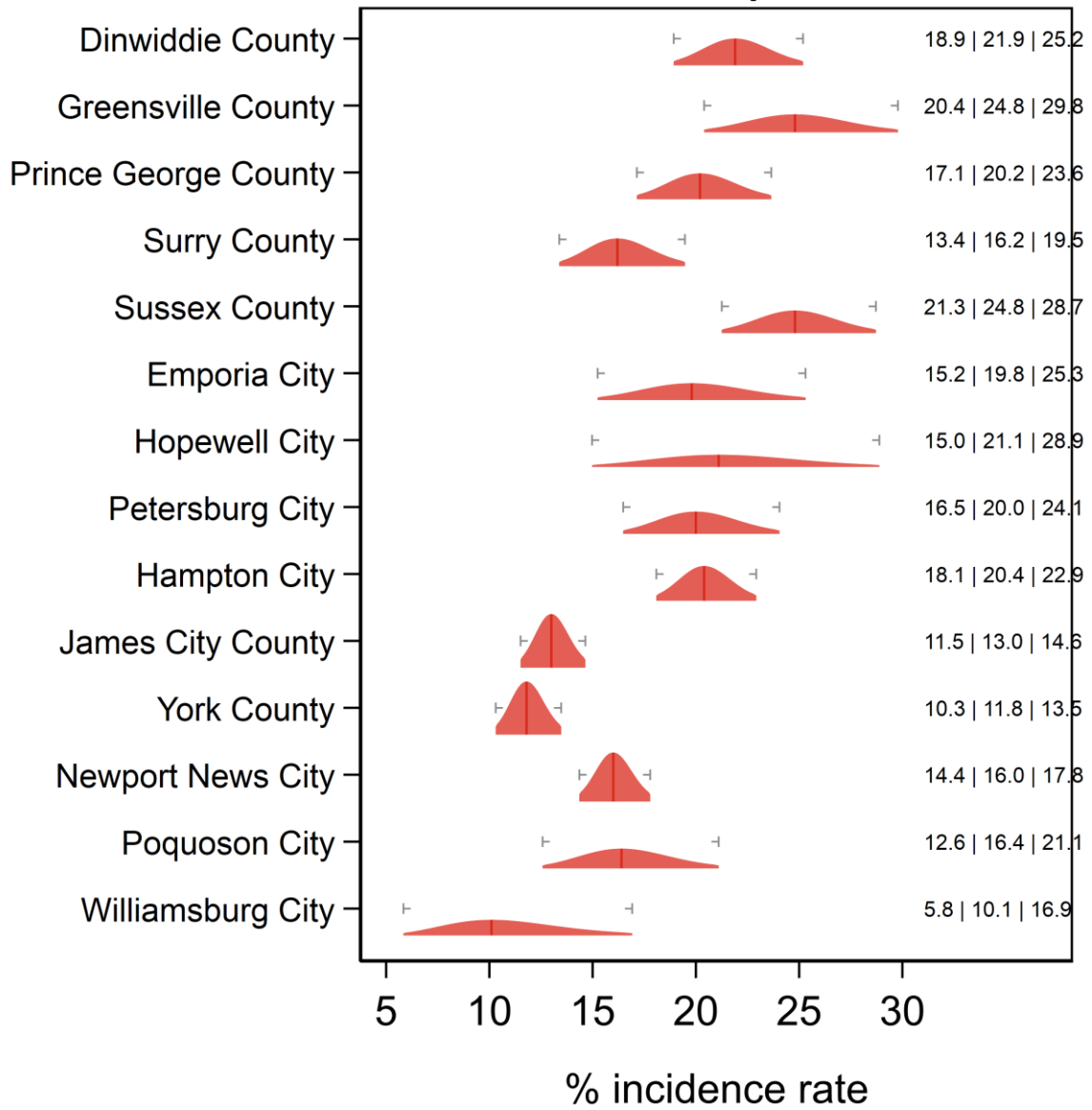
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Diagnosed with Diabetes Chesterfield, Chickahominy, Henrico and Richmond HDs



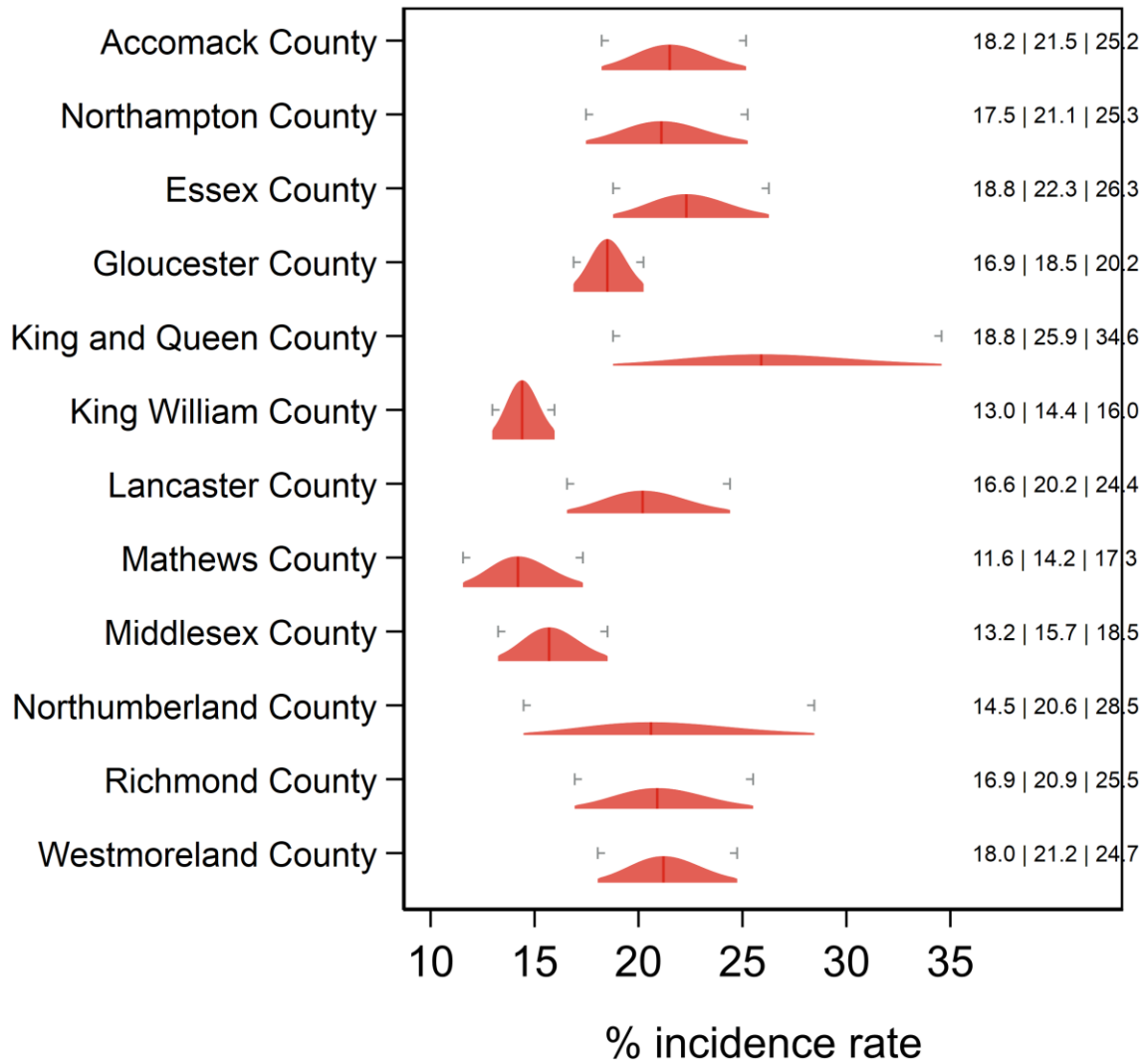
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Diagnosed with Diabetes Crater, Peninsula and Hampton HDs



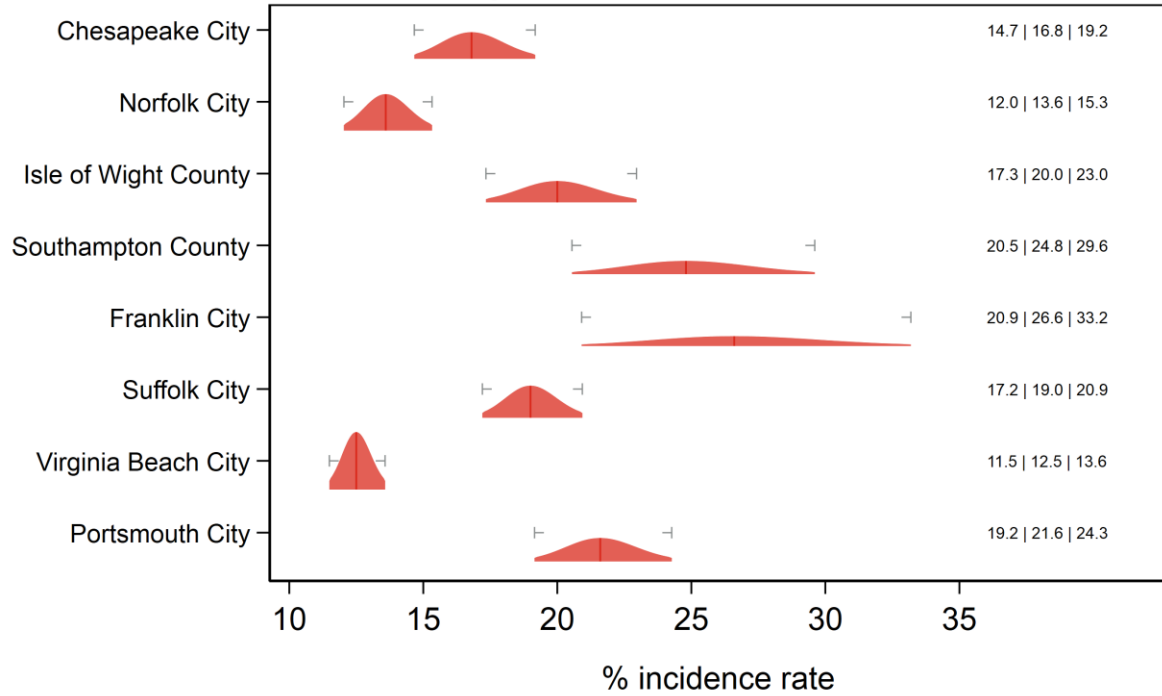
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Diagnosed with Diabetes Eastern Shore and Three Rivers HDs



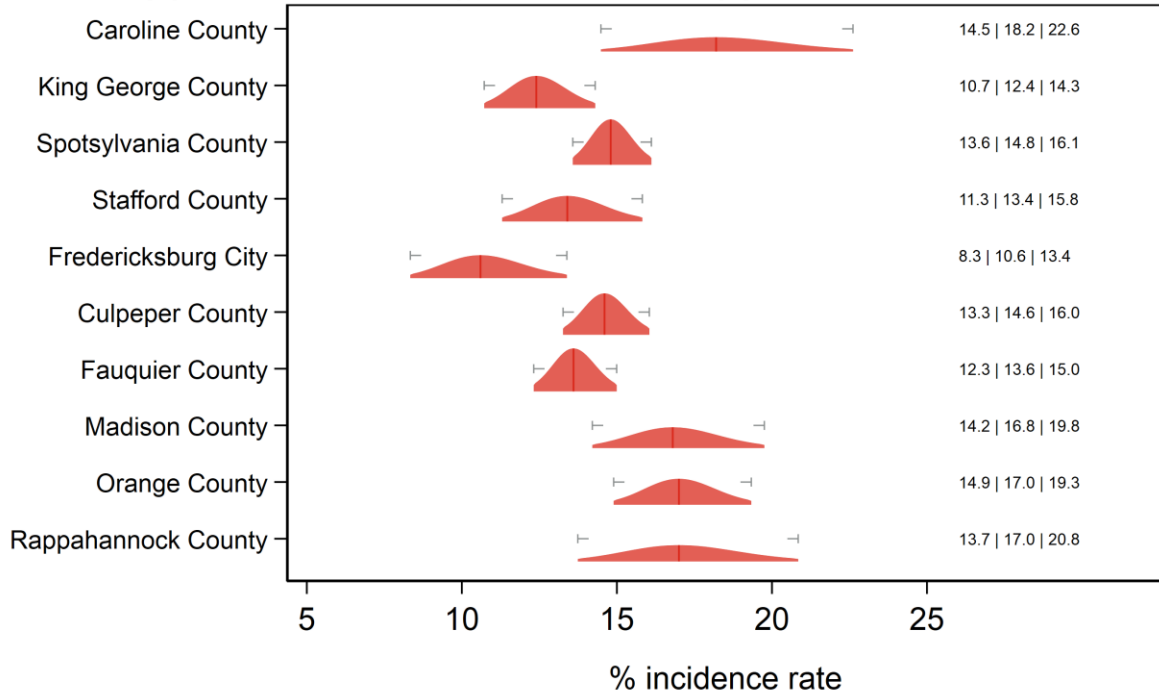
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Diagnosed with Diabetes Norfolk, Portsmouth, Chesapeake, VA Beach, W. Tidewater HDs



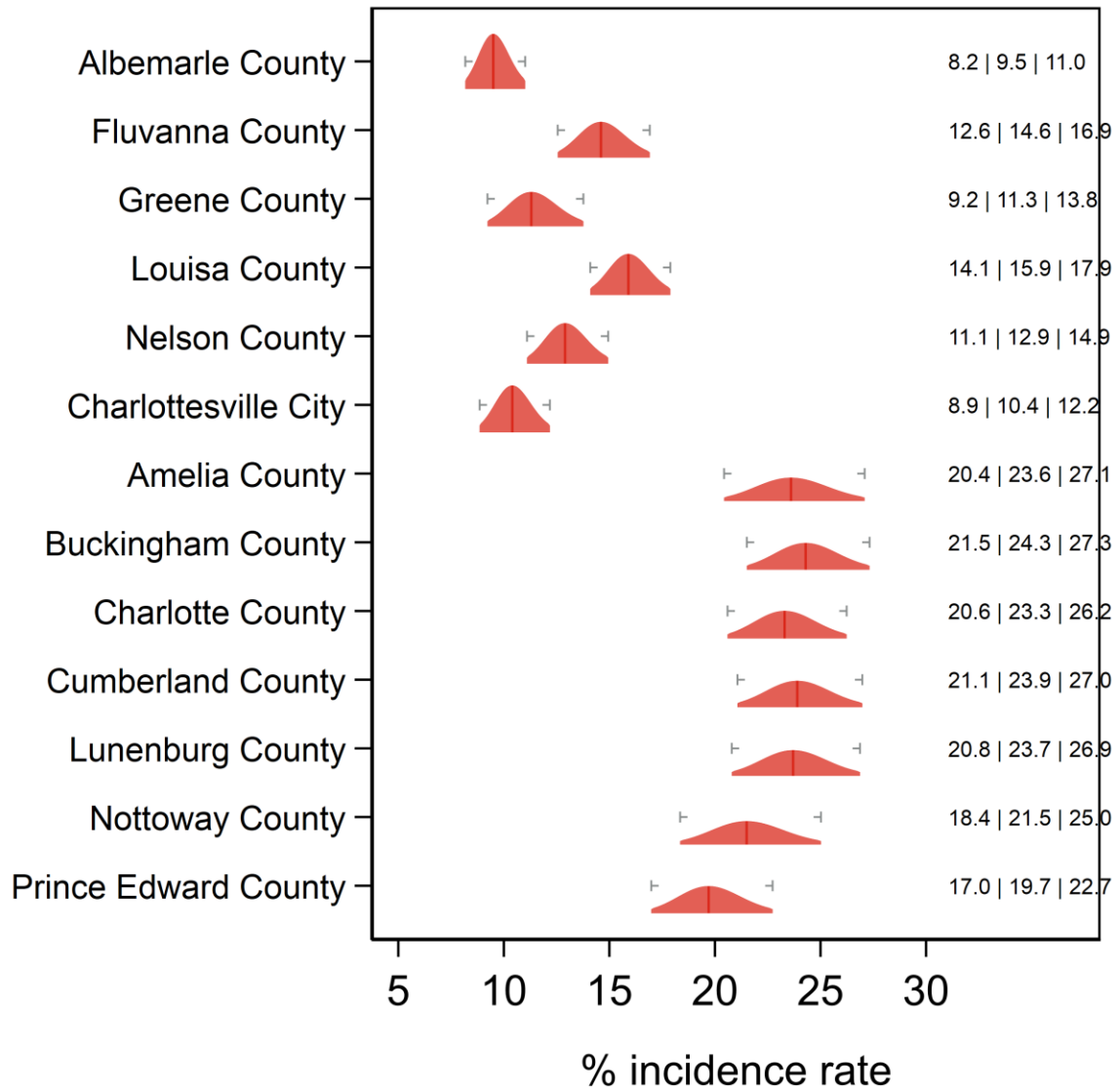
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Diagnosed with Diabetes Rappahannock/Rapidan and Rappahannock HDs



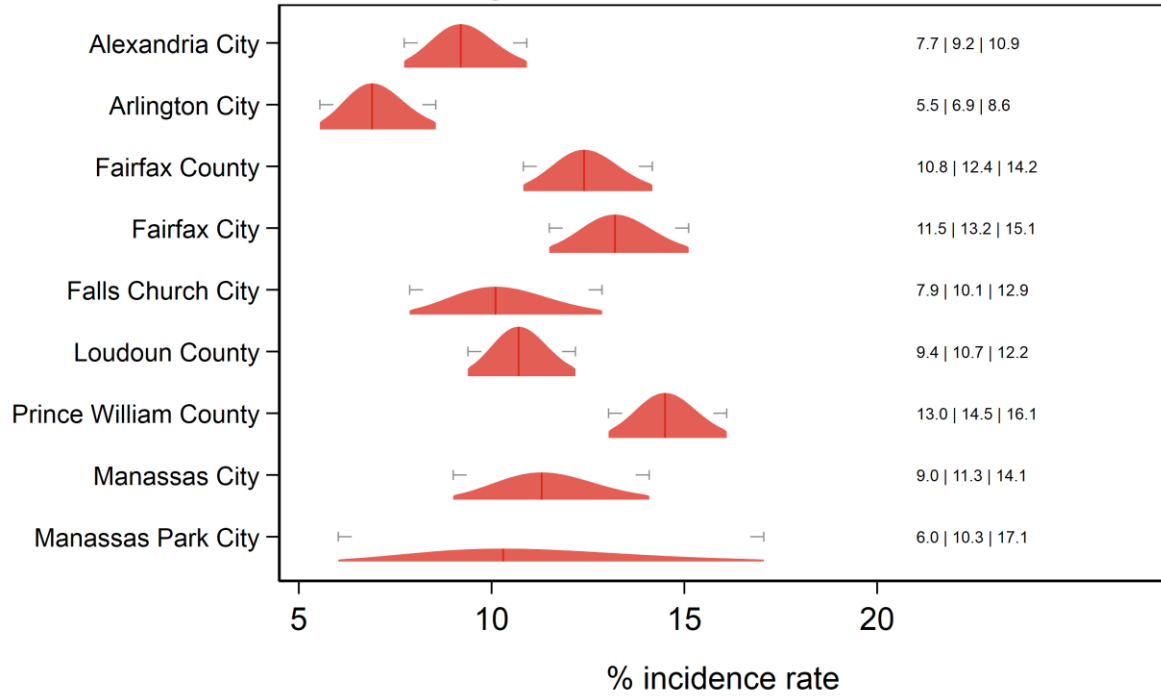
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Diagnosed with Diabetes Thomas Jefferson and Piedmont HDs



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

Diagnosed with Diabetes 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

Additional diagnostics

Direct estimate is inside the 95% SAE Wilson CI: 25 areas.

Direct estimate is outside the 95% SAE Wilson CI: 108 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: 115 areas.

SAE Wilson 95% CI partially overlaps with the 95% direct Wilson CI: 18 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: 120 areas.

SAE standard error is greater than the (nonzero) direct standard error: 5 areas.

Direct standard error is zero: 8 areas.

Proportion of SAE variance due to ACS sampling error: min = 0.49%; med = 5.36%; max = 19.09%.

Proportion of SAE variance due to sampling error in regression coefficient estimates: min = 44.11%; med = 86.62%; max = 98.75%.

Proportion of SAE variance due to model selection: min = 0.11%; med = 6.89%; max = 50.52%.

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