

Outcome 27: Doctor Inaccessible Due to Cost

Internal variable name: outc27_doctor_cost

Definition: Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?

Predictive models

	Mixed, demos only	Logit, no area effects	Mixed with area covariates
	b/se	b/se	b/se
Outcome 27: Doctor Inaccessible Due to Cost			
NH White	0.0000 (.)	0.0000 (.)	0.0000 (.)
NH Black vs. NH White	0.2856* (0.1140)	0.2798* (0.1329)	0.2724* (0.1138)
NH Asian vs. NH White	0.0658 (0.3216)	0.1047 (0.3109)	0.1083 (0.3075)
NH Other vs. NH White	0.7670** (0.2284)	0.7901*** (0.1960)	0.7754** (0.2329)
Hispanic vs. NH White	1.0413*** (0.1534)	1.0612*** (0.1518)	1.0694*** (0.1470)
SEX OF RESPONDENT=1	0.0000 (.)	0.0000 (.)	0.0000 (.)
Female	0.2207* (0.0912)	0.2131* (0.1052)	0.2131* (0.0920)
Age 18-34 vs. 65+	1.4495*** (0.1437)	1.4621*** (0.1599)	1.4658*** (0.1422)
Age 35-44 vs. 65+	1.1167*** (0.1530)	1.1171*** (0.1685)	1.1237*** (0.1517)
Age 45-54 vs. 65+	0.9092*** (0.2011)	0.9041*** (0.1749)	0.9150*** (0.2026)
Age 55-64 vs. 65+	0.6887*** (0.1393)	0.6904*** (0.1695)	0.6909*** (0.1392)
65+	0.0000 (.)	0.0000 (.)	0.0000 (.)
Average number of Person per occupied housing unit in the ACS		0.1166 (1.4047)	0.8412 (1.9072)
VA BRFSS 2014 SAE outc36_oweight_obese		3.2042 (5.5878)	6.1029 (7.5336)

Average number of Person per occupied housing unit in the ACS # VA BRFSS 2014 SAE outc36_oweight_obese		0.1461	-1.0923
		(2.1540)	(3.0010)
_cons	-3.4930***	-6.0948	-7.8025
	(0.1246)	(3.6751)	(4.8065)
Area effect variance			
var(_cons[FIPS_county])	0.1229*		0.0435
	(0.0521)		(0.0382)

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	9.3%	(4.4%, 18.5%)	7.3%	(6.3%, 8.5%)
Bath County	51017	0.0%	(0.0%, 35.6%)	6.5%	(5.2%, 8.0%)
Caroline County	51033	8.2%	(1.5%, 34.6%)	7.5%	(6.6%, 8.6%)
Clarke County	51043	0.0%	(0.0%, 24.3%)	6.1%	(5.1%, 7.2%)
Culpeper County	51047	10.8%	(3.4%, 29.8%)	8.2%	(6.5%, 10.4%)
Fauquier County	51061	11.1%	(4.6%, 24.7%)	8.1%	(6.7%, 9.8%)
Frederick County	51069	18.1%	(9.2%, 32.6%)	10.3%	(8.9%, 11.9%)
Highland County	51091	0.0%	(-0.0%, 49.0%)	5.1%	(3.3%, 7.8%)
King George County	51099	24.8%	(10.2%, 48.9%)	11.3%	(8.6%, 14.7%)
Madison County	51113	15.9%	(5.0%, 40.4%)	10.2%	(8.2%, 12.6%)
Orange County	51137	7.9%	(2.4%, 22.8%)	7.7%	(6.3%, 9.4%)
Page County	51139	2.5%	(1.1%, 22.3%)	6.2%	(5.2%, 7.3%)
Rappahannock County	51157	5.9%	(1.9%, 46.8%)	8.8%	(7.5%, 10.4%)
Rockbridge County	51163	7.2%	(2.3%, 20.6%)	6.7%	(5.8%, 7.7%)
Rockingham County	51165	8.5%	(4.1%, 17.0%)	8.7%	(7.5%, 10.1%)
Shenandoah County	51171	6.7%	(2.0%, 20.6%)	6.7%	(5.5%, 8.0%)
Spotsylvania County	51177	9.2%	(4.6%, 17.5%)	8.5%	(6.6%, 11.0%)
Stafford County	51179	8.0%	(4.1%, 15.3%)	8.7%	(6.5%, 11.5%)
Warren County	51187	6.5%	(3.3%, 20.1%)	7.6%	(6.3%, 9.1%)
Buena Vista City	51530	0.0%	(0.0%, 62.9%)	6.4%	(3.2%, 12.2%)
Fredericksburg City	51630	1.6%	(0.9%, 17.3%)	7.2%	(6.0%, 8.7%)
Harrisonburg City	51660	8.1%	(1.8%, 30.3%)	5.4%	(3.6%, 7.9%)
Lexington City	51678	0.0%	(0.0%, 99.4%)	8.1%	(5.7%, 11.3%)
Staunton City	51790	14.5%	(2.1%, 57.9%)	5.5%	(4.0%, 7.3%)
Waynesboro	51820	10.8%	(2.0%, 73.6%)	4.2%	(3.0%, 6.0%)

City					
Winchester City	51840	4.0%	(1.6%, 37.6%)	6.8%	(5.8%, 7.9%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Albemarle County	51003	3.3%	(1.3%, 7.8%)	4.6%	(3.6%, 5.9%)
Alleghany County	51005	6.3%	(1.6%, 21.7%)	6.8%	(5.5%, 8.4%)
Amherst County	51009	12.1%	(5.3%, 25.3%)	8.1%	(6.9%, 9.6%)
Appomattox County	51011	9.3%	(2.4%, 29.7%)	7.9%	(6.3%, 9.9%)
Arlington City	51013	4.6%	(2.2%, 9.3%)	4.6%	(3.0%, 7.0%)
Bedford County	51019	18.2%	(9.9%, 31.2%)	10.5%	(9.2%, 11.8%)
Botetourt County	51023	7.9%	(1.8%, 29.0%)	7.4%	(6.2%, 8.8%)
Campbell County	51031	8.2%	(3.8%, 16.6%)	8.7%	(7.2%, 10.4%)
Craig County	51045	23.2%	(5.6%, 60.6%)	11.0%	(6.9%, 17.2%)
Fairfax County	51059	8.3%	(6.1%, 11.3%)	6.9%	(5.3%, 9.0%)
Fluvanna County	51065	12.7%	(1.9%, 51.7%)	8.1%	(6.5%, 10.1%)
Greene County	51079	7.6%	(1.1%, 37.0%)	7.6%	(6.1%, 9.4%)
Loudoun County	51107	5.3%	(3.2%, 8.9%)	5.8%	(3.9%, 8.4%)
Louisa County	51109	9.2%	(4.1%, 27.2%)	10.3%	(7.9%, 13.2%)
Nelson County	51125	4.4%	(1.6%, 49.1%)	7.7%	(6.0%, 9.8%)
Prince William County	51153	19.6%	(14.1%, 26.5%)	15.5%	(10.9%, 21.4%)
Roanoke County	51161	7.4%	(3.1%, 16.6%)	6.1%	(5.2%, 7.1%)
Alexandria City	51510	12.3%	(6.3%, 22.6%)	8.0%	(6.4%, 9.9%)
Charlottesville City	51540	11.8%	(3.1%, 35.9%)	5.7%	(4.4%, 7.3%)
Covington City	51580	0.0%	(0.0%, 81.2%)	12.7%	(8.5%, 18.6%)
Fairfax City	51600	6.2%	(2.1%, 17.2%)	6.2%	(5.0%, 7.6%)
Falls Church City	51610	18.1%	(4.4%, 51.4%)	7.2%	(6.0%, 8.6%)
Lynchburg City	51680	12.3%	(5.4%, 25.4%)	7.8%	(6.5%, 9.4%)
Manassas City	51683	20.5%	(7.7%, 44.4%)	15.5%	(9.0%, 25.3%)
Manassas Park City	51685	4.2%	(1.5%, 54.2%)	15.7%	(4.3%, 43.7%)
Salem City	51775	6.1%	(0.9%, 31.9%)	7.0%	(5.8%, 8.4%)

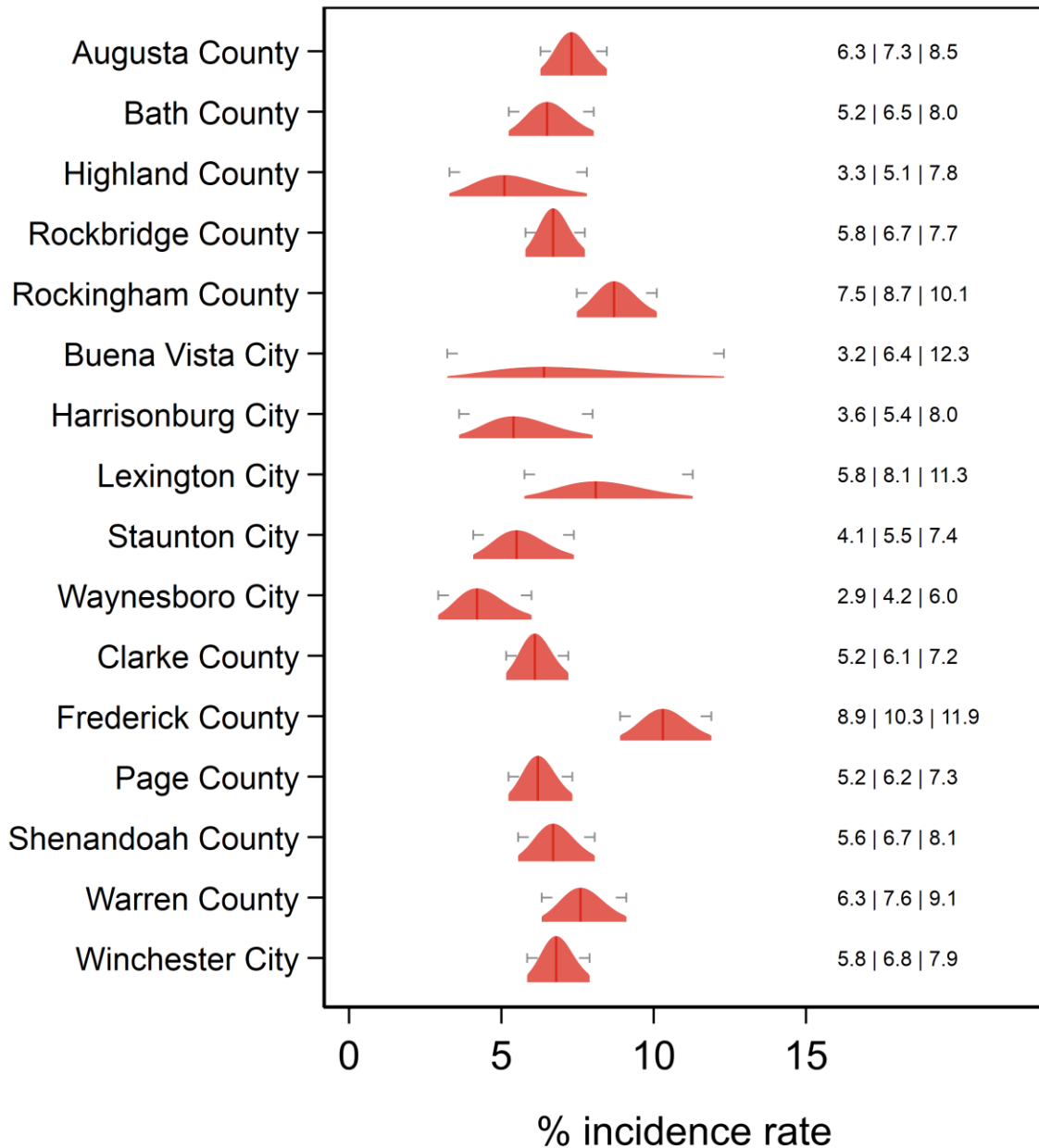
County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Bland County	51021	5.3%	(1.6%, 61.3%)	7.4%	(5.7%, 9.7%)
Buchanan County	51027	17.7%	(5.6%, 43.8%)	9.3%	(6.9%, 12.3%)
Carroll County	51035	25.1%	(8.8%, 53.8%)	8.4%	(6.9%, 10.4%)
Dickenson County	51051	29.3%	(11.0%, 58.2%)	9.0%	(6.2%, 13.0%)
Floyd County	51063	37.3%	(16.8%, 63.5%)	11.7%	(9.0%, 15.0%)
Franklin County	51067	8.2%	(2.5%, 24.1%)	7.3%	(6.3%, 8.6%)
Giles County	51071	2.3%	(1.1%, 45.0%)	8.9%	(7.2%, 10.8%)
Grayson County	51077	33.1%	(13.3%, 61.6%)	12.2%	(7.5%, 19.2%)
Henry County	51089	5.2%	(1.6%, 15.6%)	6.9%	(5.5%, 8.6%)
Lee County	51105	8.3%	(2.5%, 24.1%)	8.4%	(6.8%, 10.3%)
Montgomery County	51121	11.9%	(5.1%, 25.6%)	6.5%	(5.0%, 8.3%)
Patrick County	51141	10.5%	(2.7%, 33.4%)	9.7%	(7.5%, 12.6%)
Pittsylvania County	51143	10.4%	(4.8%, 20.9%)	9.0%	(7.1%, 11.3%)
Pulaski County	51155	4.7%	(1.4%, 14.9%)	7.8%	(6.1%, 10.0%)
Russell County	51167	4.8%	(1.2%, 18.1%)	7.5%	(5.7%, 9.8%)
Scott County	51169	11.0%	(4.7%, 23.6%)	9.1%	(7.3%, 11.3%)
Smyth County	51173	9.6%	(3.3%, 24.7%)	7.0%	(5.3%, 9.3%)
Tazewell County	51185	13.6%	(6.5%, 26.1%)	8.8%	(7.4%, 10.4%)
Washington County	51191	5.1%	(2.0%, 12.6%)	5.6%	(4.2%, 7.3%)
Wise County	51195	9.2%	(4.3%, 18.6%)	7.5%	(6.3%, 8.9%)
Wythe County	51197	9.2%	(3.1%, 24.5%)	6.8%	(5.8%, 8.1%)
Bristol City	51520	29.4%	(5.9%, 73.5%)	7.9%	(4.5%, 13.5%)
Danville City	51590	5.9%	(0.9%, 29.3%)	7.3%	(5.5%, 9.6%)
Galax City	51640	35.3%	(1.3%, 96.4%)	6.4%	(1.8%, 19.9%)
Martinsville City	51690	29.0%	(6.8%, 69.7%)	8.5%	(4.6%, 15.1%)
Norton City	51720	75.3%	(18.8%, 97.6%)	6.7%	(1.3%, 28.4%)
Radford City	51750	5.6%	(0.9%, 27.8%)	5.3%	(3.8%, 7.4%)
Roanoke City	51770	8.5%	(3.8%, 17.9%)	6.2%	(5.1%, 7.7%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Amelia County	51007	16.7%	(3.0%, 56.8%)	7.7%	(6.7%, 8.8%)
Brunswick County	51025	2.3%	(1.2%, 26.4%)	8.3%	(5.8%, 11.7%)
Buckingham County	51029	9.8%	(1.8%, 39.0%)	12.3%	(8.9%, 16.7%)
Charles City County	51036	0.0%	(0.0%, 78.6%)	10.0%	(7.8%, 12.7%)
Charlotte County	51037	12.5%	(3.2%, 38.5%)	10.3%	(8.1%, 12.9%)
Chesterfield County	51041	11.2%	(6.5%, 18.8%)	8.9%	(7.9%, 10.2%)
Cumberland County	51049	34.3%	(9.4%, 72.4%)	9.6%	(8.5%, 10.8%)
Dinwiddie County	51053	4.6%	(2.6%, 17.7%)	9.2%	(7.3%, 11.4%)
Goochland County	51075	0.0%	(-0.0%, 34.1%)	5.6%	(4.7%, 6.7%)
Greensville County	51081	8.1%	(3.2%, 37.1%)	9.1%	(7.5%, 10.9%)
Halifax County	51083	16.0%	(6.6%, 33.9%)	10.4%	(8.7%, 12.3%)
Hanover County	51085	0.0%	(0.0%, 7.3%)	5.6%	(4.7%, 6.8%)
Henrico County	51087	9.5%	(5.9%, 15.0%)	7.5%	(6.7%, 8.5%)
Lunenburg County	51111	4.0%	(2.3%, 31.4%)	11.4%	(8.2%, 15.6%)
Mecklenburg County	51117	18.2%	(8.2%, 35.6%)	10.2%	(8.9%, 11.6%)
New Kent County	51127	9.1%	(4.4%, 29.5%)	9.2%	(7.3%, 11.4%)
Nottoway County	51135	4.4%	(0.7%, 22.8%)	8.0%	(6.2%, 10.1%)
Powhatan County	51145	1.9%	(1.2%, 28.0%)	8.4%	(6.9%, 10.2%)
Prince Edward County	51147	8.6%	(4.0%, 26.7%)	9.8%	(7.5%, 12.8%)
Prince George County	51149	22.2%	(7.4%, 50.6%)	12.1%	(8.7%, 16.6%)
Surry County	51181	0.0%	(0.0%, 48.8%)	10.1%	(7.8%, 12.9%)
Sussex County	51183	2.2%	(1.1%, 26.3%)	9.0%	(7.5%, 10.9%)
Colonial Heights City	51570	21.2%	(6.7%, 50.1%)	13.1%	(10.5%, 16.2%)
Emporia City	51595	43.8%	(4.5%, 92.7%)	14.2%	(8.4%, 23.2%)
Hopewell City	51670	1.0%	(0.6%, 28.0%)	10.5%	(8.2%, 13.5%)
Petersburg	51730	6.5%	(3.9%, 27.1%)	10.2%	(7.6%, 13.6%)

City					
Richmond City	51760	13.4%	(7.6%, 22.4%)	10.4%	(9.1%, 11.7%)

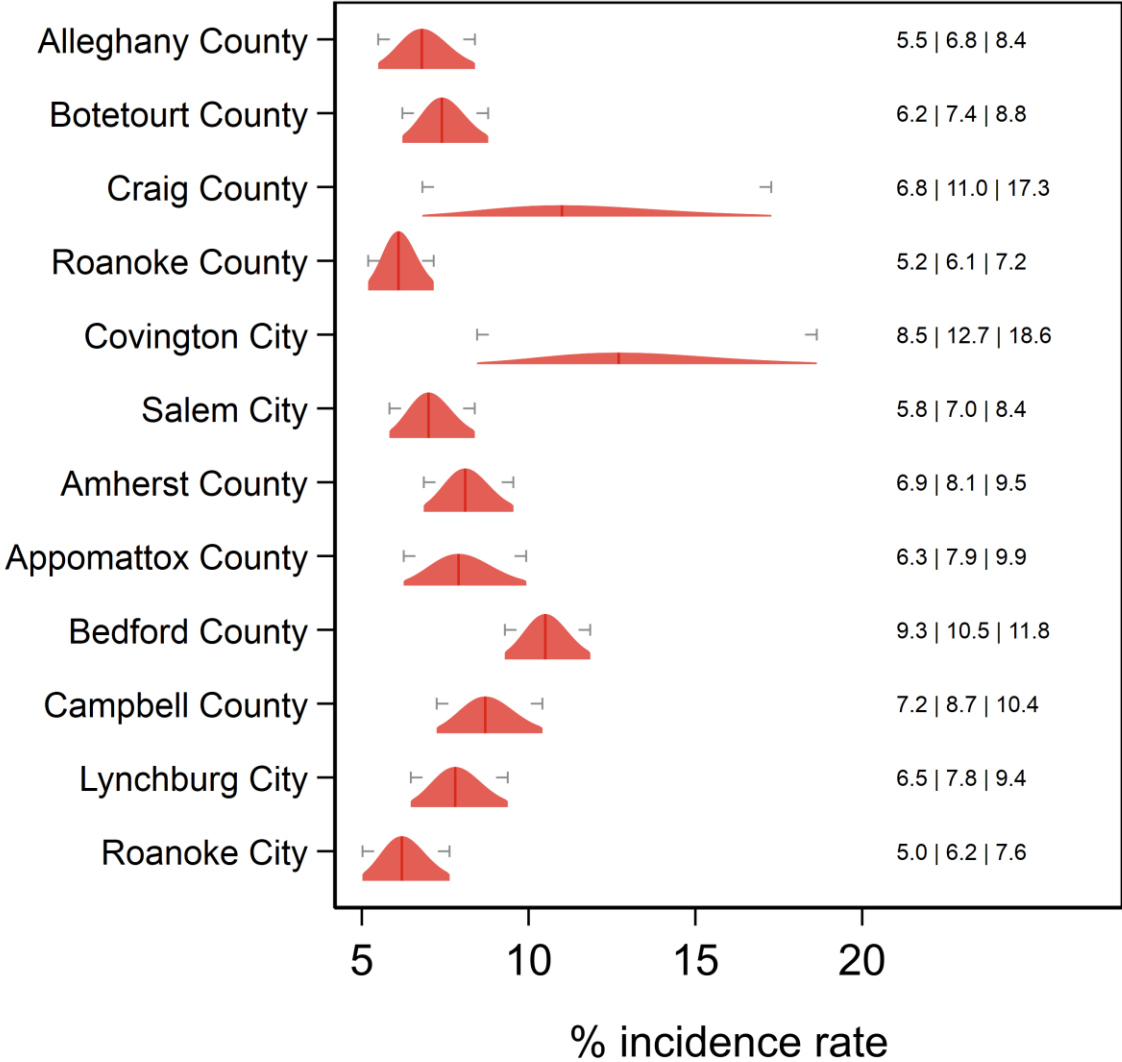
County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Accomack County	51001	13.0%	(6.3%, 24.9%)	8.4%	(7.2%, 9.9%)
Essex County	51057	27.1%	(9.6%, 56.6%)	9.9%	(8.3%, 11.8%)
Gloucester County	51073	11.7%	(5.1%, 24.9%)	8.3%	(7.1%, 9.6%)
Isle of Wight County	51093	10.4%	(2.4%, 35.2%)	8.6%	(7.1%, 10.3%)
James City County	51095	8.9%	(4.3%, 17.8%)	5.9%	(4.8%, 7.3%)
King and Queen County	51097	0.0%	(0.0%, 47.4%)	4.7%	(3.8%, 5.7%)
King William County	51101	9.3%	(4.3%, 43.6%)	7.7%	(6.2%, 9.5%)
Lancaster County	51103	4.7%	(2.3%, 25.1%)	8.1%	(5.9%, 11.2%)
Mathews County	51115	11.1%	(4.8%, 30.4%)	6.3%	(4.0%, 9.6%)
Middlesex County	51119	9.7%	(2.4%, 31.9%)	9.3%	(6.8%, 12.6%)
Northampton County	51131	1.4%	(0.8%, 20.0%)	7.5%	(5.7%, 9.9%)
Northumberland County	51133	10.1%	(2.5%, 33.4%)	9.8%	(7.0%, 13.4%)
Richmond County	51159	27.2%	(12.7%, 48.9%)	13.3%	(10.2%, 17.3%)
Southampton County	51175	14.0%	(5.3%, 32.0%)	11.0%	(8.6%, 13.9%)
Westmoreland County	51193	8.4%	(2.4%, 25.2%)	8.6%	(6.7%, 11.0%)
York County	51199	5.6%	(2.0%, 14.9%)	6.5%	(5.7%, 7.5%)
Chesapeake City	51550	11.6%	(7.0%, 18.8%)	9.6%	(8.1%, 11.4%)
Franklin City	51620	0.0%	(0.0%, 41.9%)	7.8%	(6.1%, 10.1%)
Hampton City	51650	7.1%	(3.4%, 14.2%)	8.2%	(6.9%, 9.8%)
Newport News City	51700	12.7%	(7.3%, 21.3%)	10.2%	(8.9%, 11.6%)
Norfolk City	51710	21.0%	(14.1%, 30.0%)	15.2%	(13.6%, 17.0%)
Poquoson City	51735	11.7%	(1.7%, 50.9%)	7.7%	(4.2%, 13.6%)
Portsmouth City	51740	13.5%	(6.9%, 24.6%)	10.7%	(9.3%, 12.4%)
Suffolk City	51800	8.0%	(3.5%, 17.6%)	8.9%	(7.1%, 11.0%)
Virginia Beach City	51810	11.9%	(7.9%, 17.4%)	9.3%	(8.3%, 10.4%)
Williamsburg City	51830	9.5%	(1.4%, 43.8%)	8.8%	(7.2%, 10.9%)

Doctor Inaccessible Due to Cost Central Shenandoah and Lord Fairfax HDs



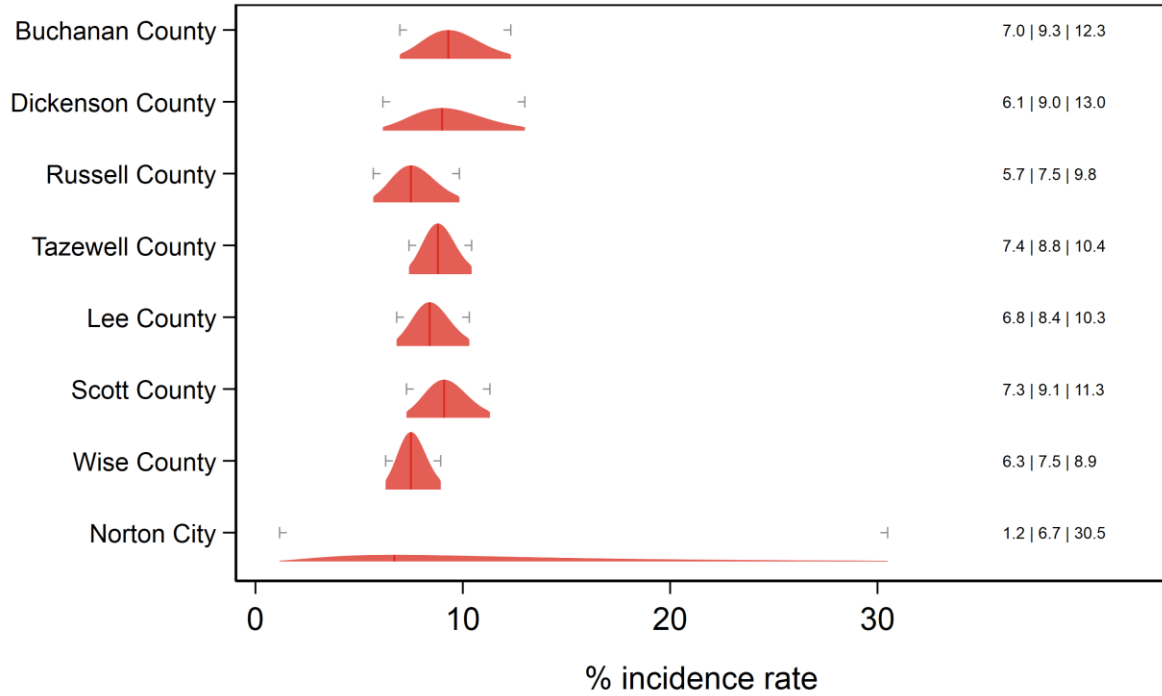
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
Gray markers: 95% confidence interval

Doctor Inaccessible Due to Cost Alleghany, Roanoke and Central Virginia HDs



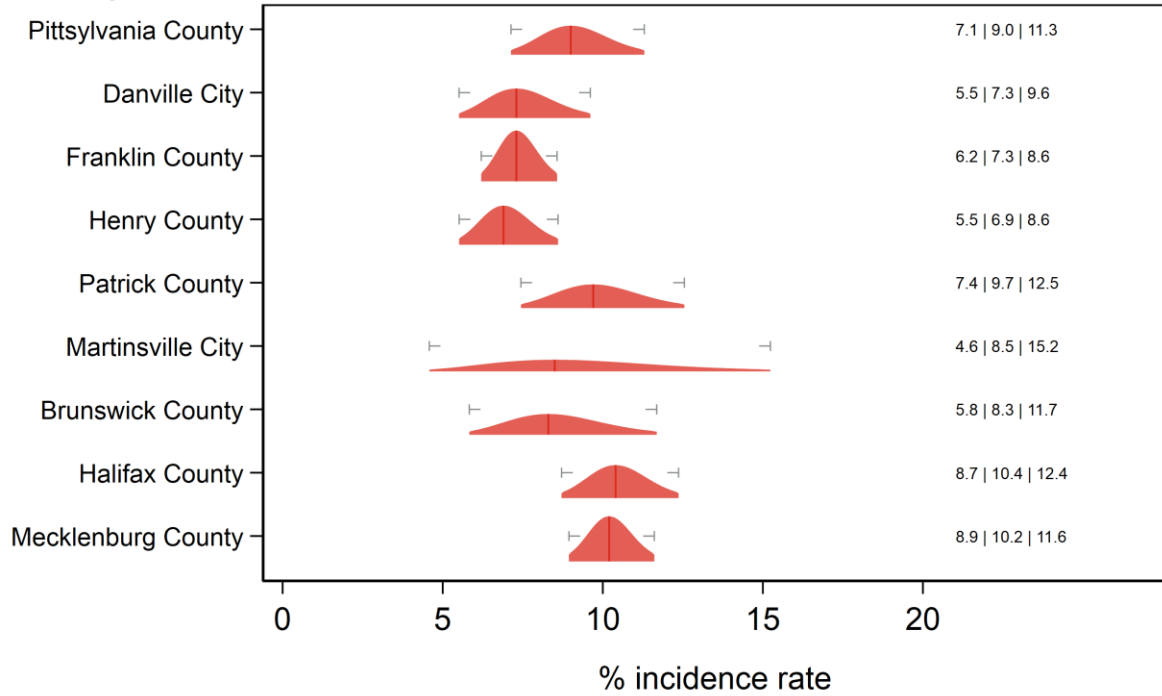
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Doctor Inaccessible Due to Cost Cumberland Plateau and Lenowisco HDs



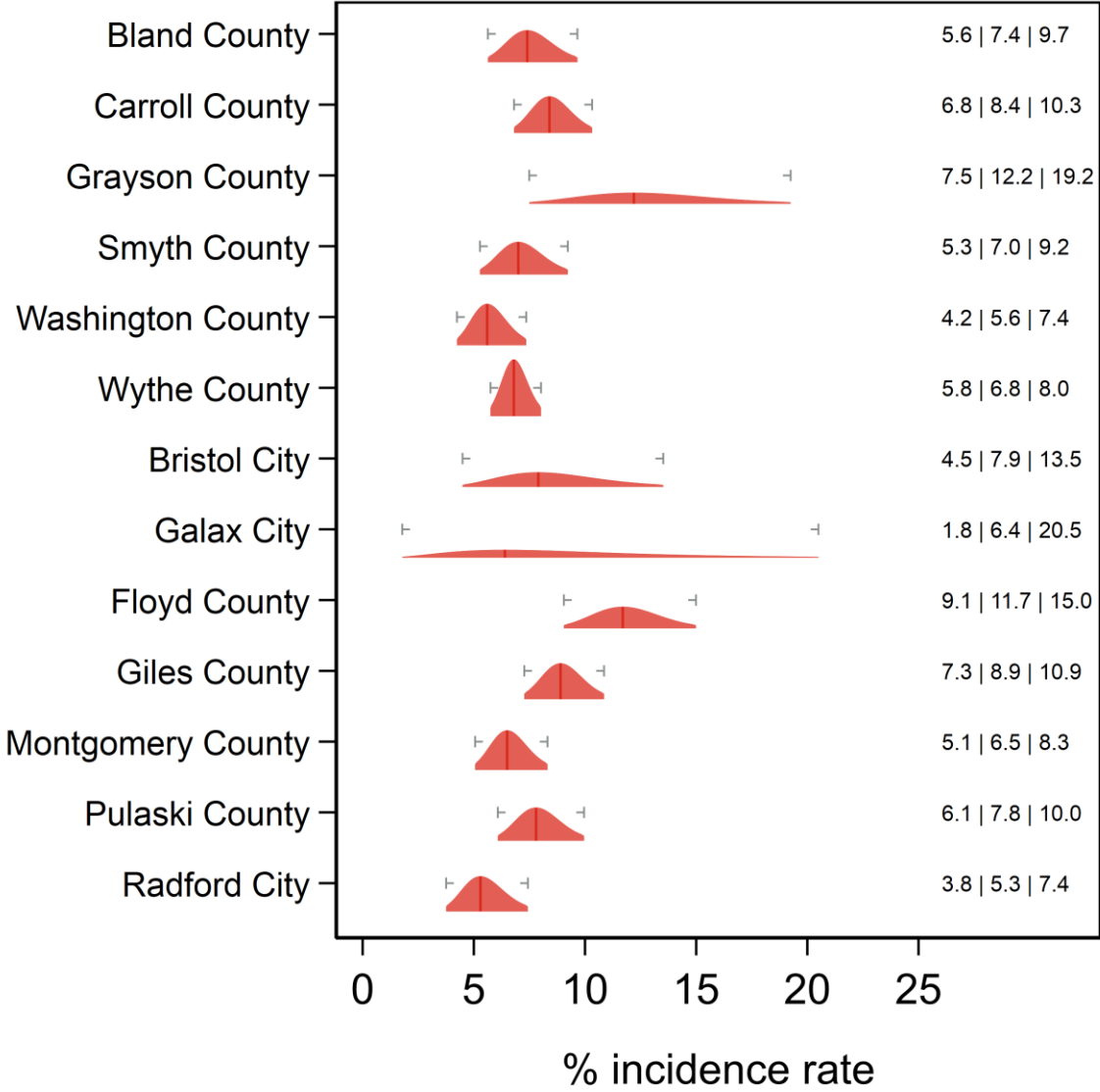
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 Gray markers: 95% confidence interval

Doctor Inaccessible Due to Cost Pittsylvania/Danville, Southside and West Piedmont HDs



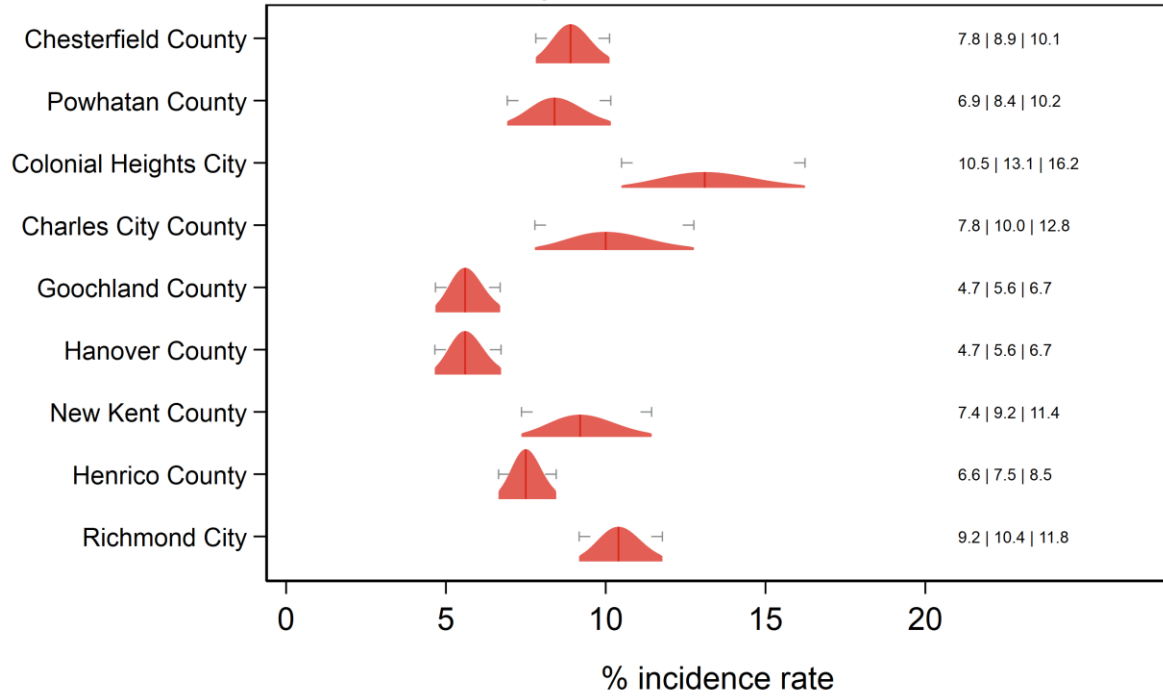
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Doctor Inaccessible Due to Cost New River and Mount Rogers HDs



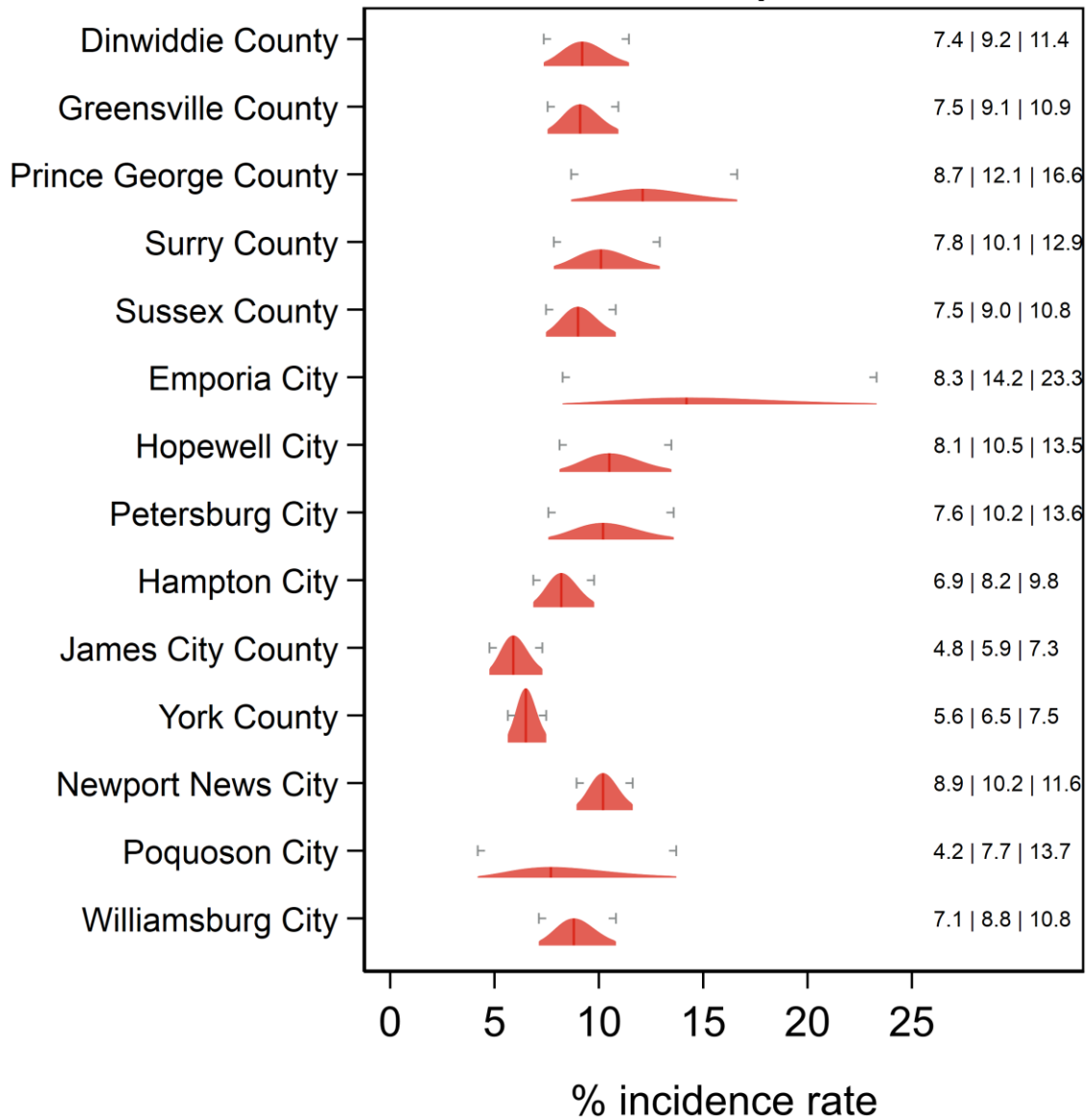
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Doctor Inaccessible Due to Cost Chesterfield, Chickahominy, Henrico and Richmond HDs



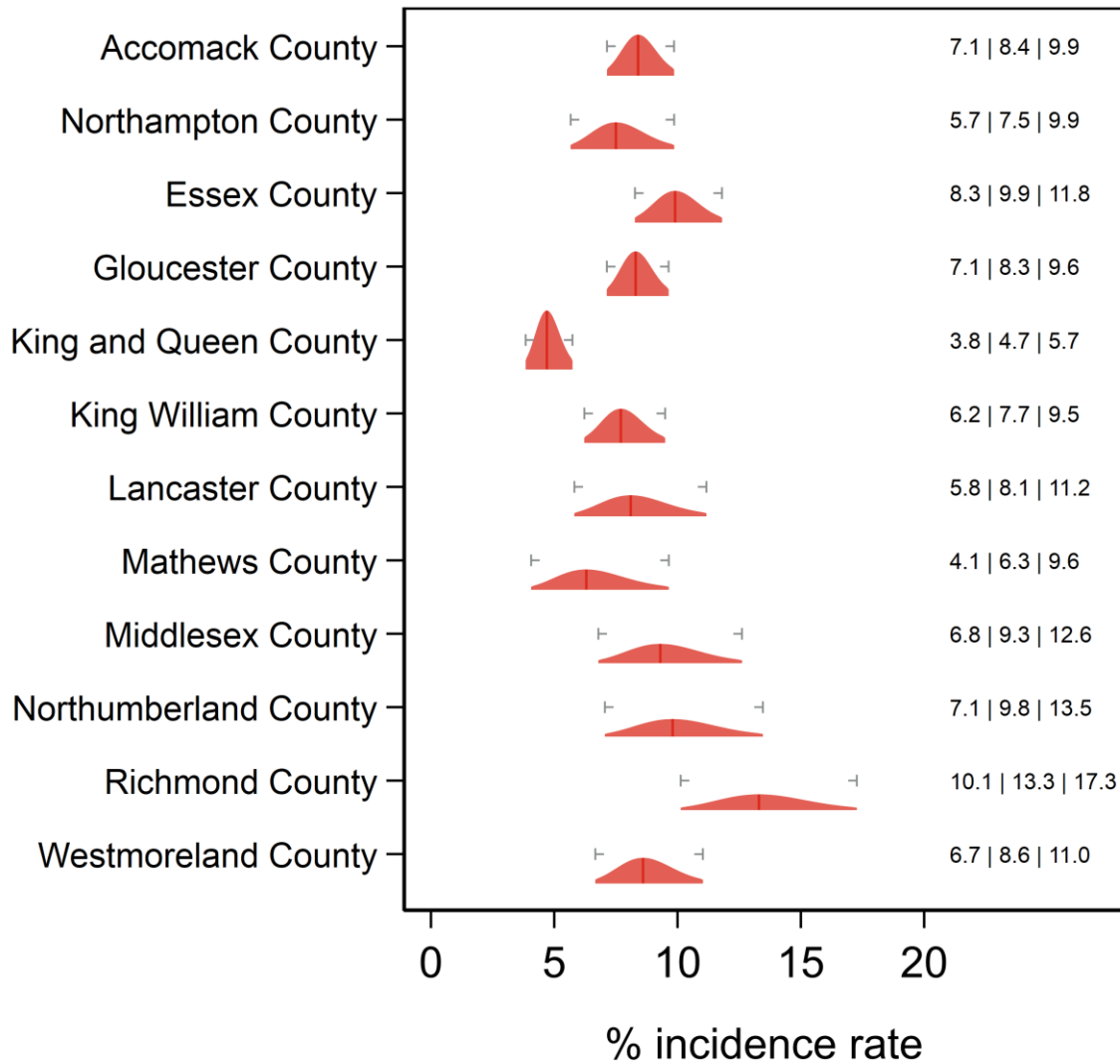
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Doctor Inaccessible Due to Cost Crater, Peninsula and Hampton HDs



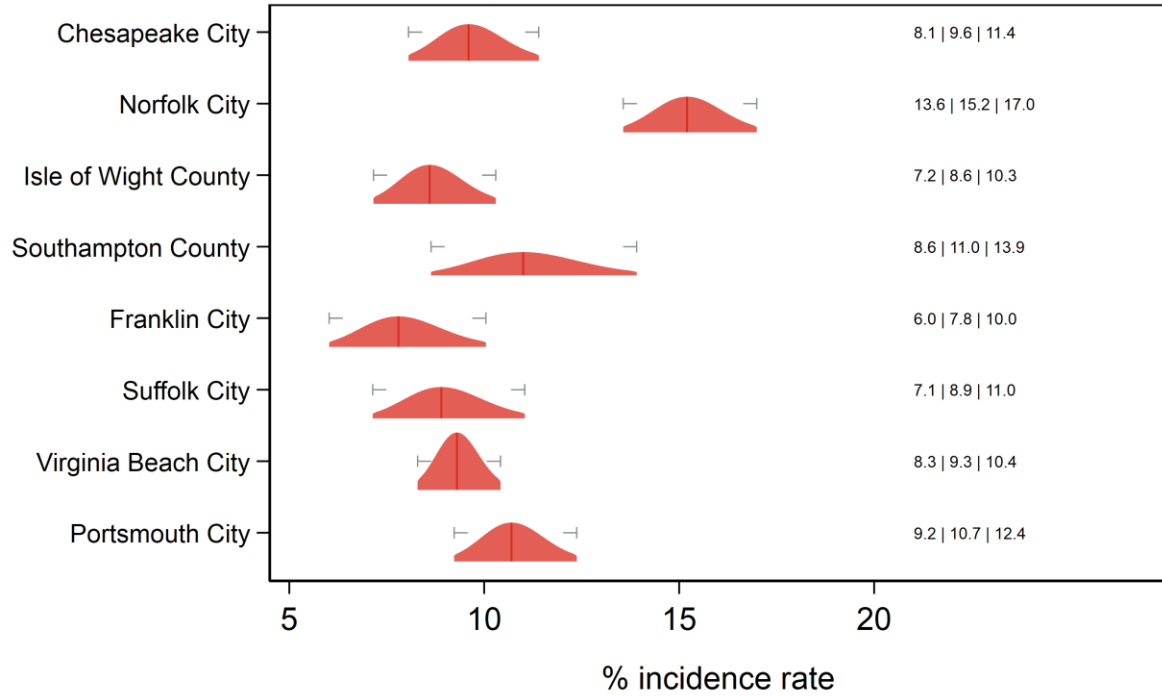
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Doctor Inaccessible Due to Cost Eastern Shore and Three Rivers HDs



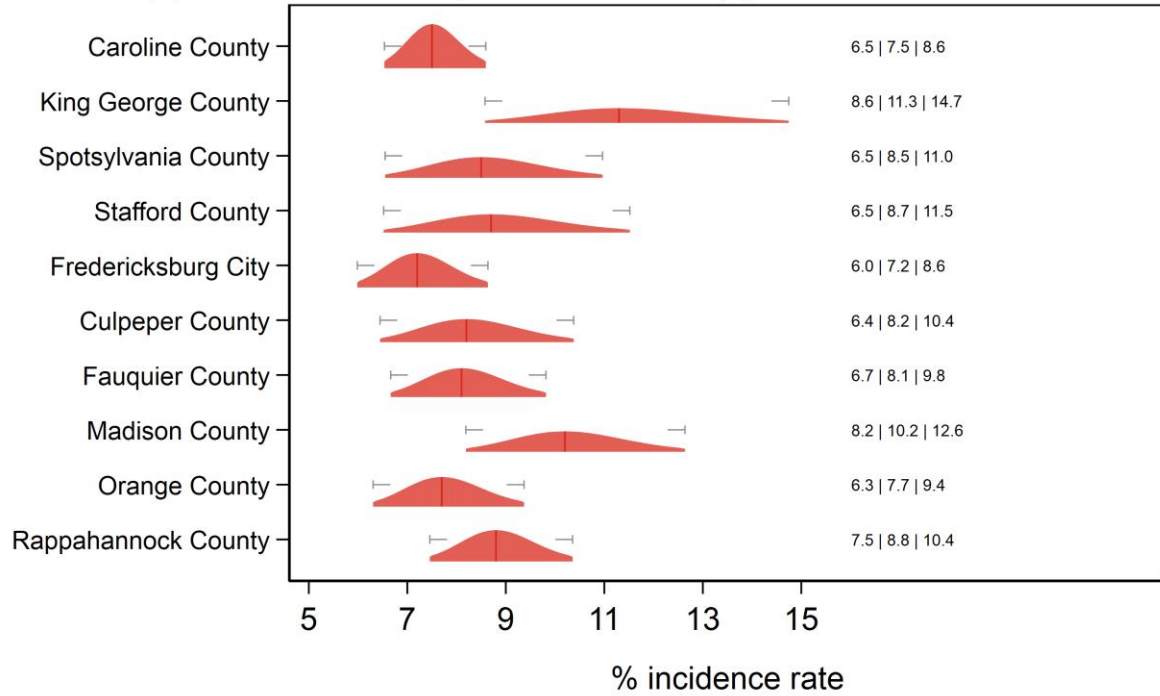
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Doctor Inaccessible Due to Cost Norfolk, Portsmouth, Chesapeake, VA Beach, W. Tidewater HDs



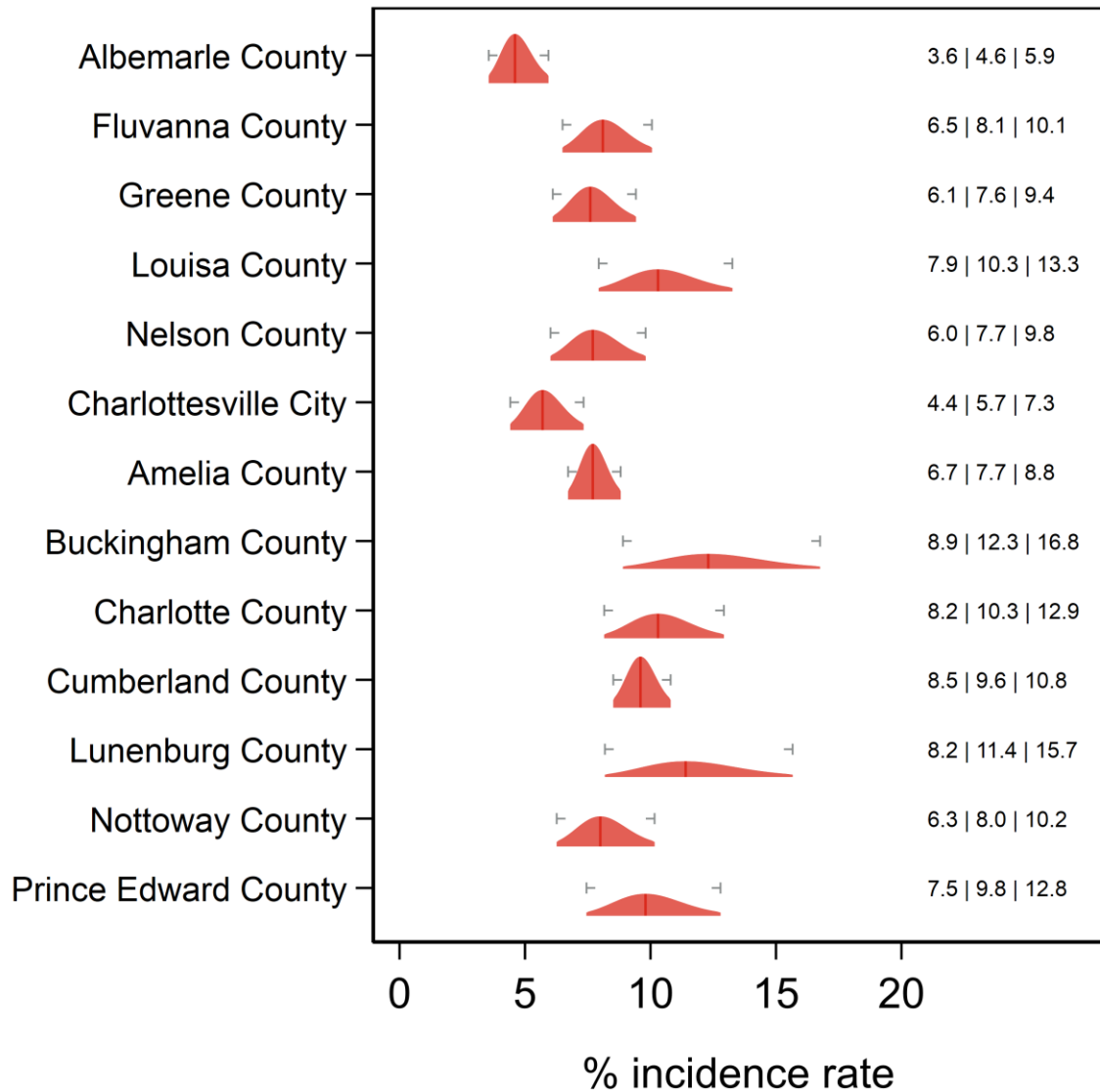
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Doctor Inaccessible Due to Cost Rappahannock/Rapidan and Rappahannock HDs



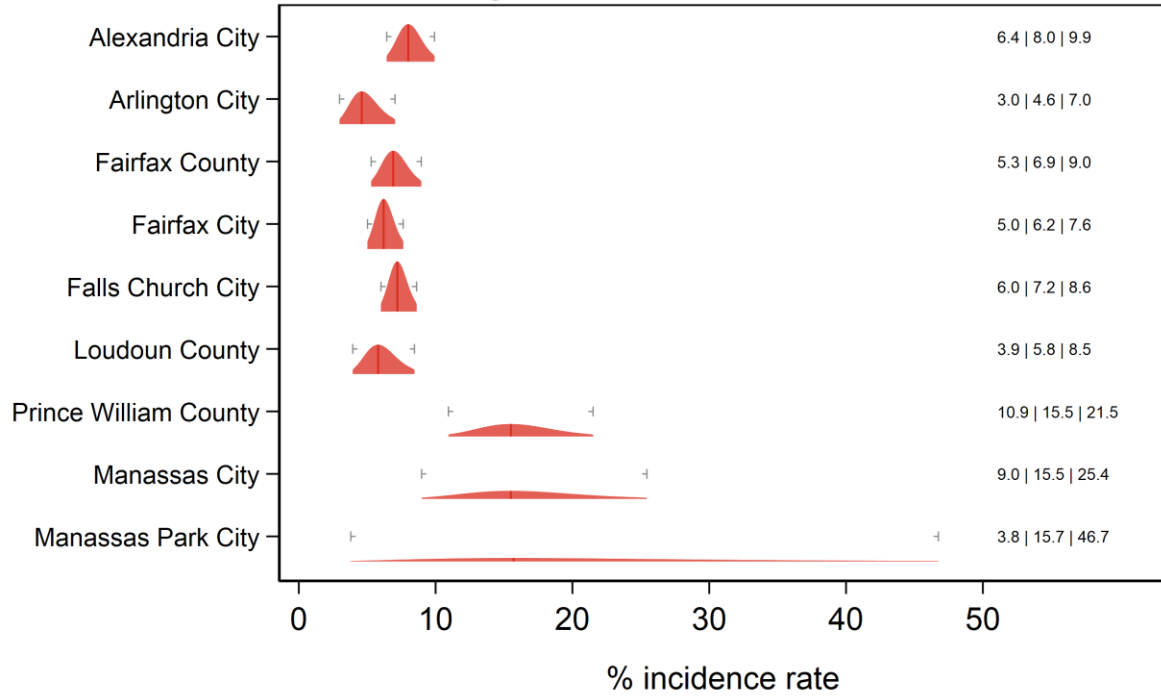
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Doctor Inaccessible Due to Cost Thomas Jefferson and Piedmont HDs



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

Doctor Inaccessible Due to Cost 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: 42 areas.

Direct estimate is outside the 95% SAE Wilson CI: 91 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: 119 areas.

SAE standard error is greater than the (nonzero) direct standard error: 2 areas.

Direct standard error is zero: 12 areas.

Proportion of SAE variance due to ACS sampling error: min = 0.05%; med = 3.99%; max = 15.32%.

Proportion of SAE variance due to sampling error in regression coefficient estimates: min = 0.46%; med = 57.19%; max = 98.69%.

Proportion of SAE variance due to model selection: min = 0.08%; med = 17.54%; max = 99.14%.

Proportion of SAE variance due to area random effects: min = 0.28%; med = 11.48%; max = 36.77%.