

Outcome 12: Dental visit in the past year

Internal variable name: outc12_dentist

Definition: Adults who have visited a dentist, dental hygienist or dental clinic within the past year

Predictive models

	Mixed, demos only	Logit, no area effects	Mixed with area covariates
	b/se	b/se	b/se
Outcome 12: Dental visit in the past year			
NH White	0.0000 (.)	0.0000 (.)	0.0000 (.)
NH Black vs. NH White	-0.4537*** (0.0748)	-0.4045*** (0.0866)	- 0.4051*** (0.0784)
NH Asian vs. NH White	-0.2231 (0.1433)	-0.2666 (0.1938)	-0.2668 (0.1415)
NH Other vs. NH White	-0.2109 (0.1445)	-0.2239 (0.1368)	-0.2238 (0.1449)
Hispanic vs. NH White	-0.4732** (0.1691)	-0.4938*** (0.1291)	-0.4943** (0.1759)
SEX OF RESPONDENT=1	0.0000 (.)	0.0000 (.)	0.0000 (.)
Female	0.2118** (0.0704)	0.2096** (0.0662)	0.2096** (0.0729)
Age 18-34 vs. 65+	-0.3282*** (0.0924)	-0.3324*** (0.0900)	- 0.3326*** (0.0863)
Age 35-44 vs. 65+	0.0145 (0.1245)	-0.0120 (0.1035)	-0.0119 (0.1222)
Age 45-54 vs. 65+	0.0158 (0.1137)	-0.0014 (0.1004)	-0.0014 (0.1131)
Age 55-64 vs. 65+	0.0102 (0.0780)	-0.0019 (0.0890)	-0.0018 (0.0769)
65+	0.0000 (.)	0.0000 (.)	0.0000 (.)
Percentage calculated by dividing College_ACS_15_19 by Pop_25yrs_Over_ACS_15_19		0.4571 (0.4433)	0.4568 (0.5353)
VA BRFSS 2014 SAE		0.2793	0.2738

outc28_dentist			
		(0.8413)	(0.9023)
VA BRFSS 2017 SAE outc4_phys_activity		1.8793*	1.8796*
		(0.7687)	(0.8996)
% Smokers, County Rankings/BRFSS		-0.0354	-0.0356
		(0.0216)	(0.0251)
_cons	0.9255***	-0.1298	-0.1220
	(0.1021)	(0.8572)	(0.9493)
Area effect variance			
var(_cons[FIPS_county])	0.1235*		0.0008
	(0.0539)		(0.0394)

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	57.6%	(46.1%, 68.4%)	71.3%	(67.5%, 74.8%)
Bath County	51017	88.9%	(53.7%, 96.4%)	69.7%	(63.3%, 75.4%)
Caroline County	51033	44.1%	(23.5%, 66.9%)	66.9%	(63.5%, 70.2%)
Clarke County	51043	87.5%	(59.7%, 97.1%)	64.0%	(53.4%, 73.4%)
Culpeper County	51047	64.2%	(44.8%, 79.9%)	67.5%	(64.1%, 70.8%)
Fauquier County	51061	67.0%	(52.5%, 78.9%)	73.4%	(70.2%, 76.3%)
Frederick County	51069	67.9%	(53.8%, 79.3%)	71.8%	(68.1%, 75.2%)
Highland County	51091	93.8%	(46.6%, 98.1%)	69.2%	(60.4%, 76.8%)
King George County	51099	69.6%	(46.4%, 85.8%)	73.2%	(69.1%, 77.0%)
Madison County	51113	76.6%	(53.9%, 90.1%)	67.2%	(63.8%, 70.4%)
Orange County	51137	78.9%	(61.5%, 89.7%)	69.3%	(66.2%, 72.2%)
Page County	51139	71.8%	(50.5%, 86.4%)	61.9%	(56.4%, 67.1%)
Rappahannock County	51157	91.8%	(50.7%, 97.9%)	71.1%	(66.4%, 75.4%)
Rockbridge County	51163	77.7%	(61.0%, 88.6%)	72.8%	(69.1%, 76.2%)
Rockingham County	51165	76.3%	(64.1%, 85.3%)	69.6%	(65.7%, 73.3%)
Shenandoah County	51171	68.6%	(51.6%, 81.8%)	68.1%	(63.8%, 72.1%)
Spotsylvania County	51177	71.8%	(60.9%, 80.7%)	68.9%	(66.2%, 71.4%)
Stafford County	51179	69.4%	(59.2%, 78.1%)	74.1%	(70.4%, 77.4%)
Warren County	51187	69.5%	(52.0%, 82.8%)	71.1%	(67.3%, 74.6%)
Buena Vista City	51530	74.6%	(19.8%, 97.2%)	55.0%	(45.6%, 63.9%)
Fredericksburg City	51630	77.6%	(56.8%, 90.1%)	71.5%	(67.0%, 75.5%)
Harrisonburg City	51660	44.4%	(20.4%, 71.4%)	63.9%	(57.7%, 69.7%)
Lexington City	51678	100.0%	(0.6%, 100.0%)	77.9%	(71.8%, 82.9%)
Staunton City	51790	67.3%	(33.9%, 89.2%)	72.9%	(68.0%, 77.3%)
Waynesboro	51820	11.6%	(2.6%, 73.5%)	68.1%	(65.2%, 70.9%)

City					
Winchester City	51840	64.5%	(30.4%, 88.3%)	66.0%	(59.8%, 71.7%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Albemarle County	51003	75.1%	(64.3%, 83.5%)	76.8%	(72.9%, 80.2%)
Alleghany County	51005	59.0%	(38.6%, 76.7%)	69.9%	(65.3%, 74.1%)
Amherst County	51009	71.7%	(55.4%, 83.8%)	67.6%	(63.9%, 71.0%)
Appomattox County	51011	75.5%	(57.7%, 87.5%)	69.7%	(65.6%, 73.5%)
Arlington City	51013	89.0%	(81.2%, 93.9%)	82.6%	(76.8%, 87.2%)
Bedford County	51019	65.5%	(53.7%, 75.6%)	74.1%	(70.2%, 77.7%)
Botetourt County	51023	78.1%	(58.6%, 90.0%)	75.5%	(71.4%, 79.3%)
Campbell County	51031	69.6%	(57.1%, 79.8%)	64.0%	(60.5%, 67.4%)
Craig County	51045	73.9%	(35.6%, 93.6%)	72.7%	(67.8%, 77.2%)
Fairfax County	51059	78.7%	(74.6%, 82.2%)	26.0%	(22.8%, 29.4%)
Fluvanna County	51065	77.0%	(45.8%, 93.0%)	74.9%	(70.8%, 78.7%)
Greene County	51079	52.8%	(20.8%, 82.7%)	68.3%	(65.2%, 71.3%)
Loudoun County	51107	74.4%	(66.9%, 80.7%)	79.6%	(75.8%, 82.9%)
Louisa County	51109	57.0%	(35.4%, 76.2%)	68.7%	(65.3%, 71.8%)
Nelson County	51125	50.1%	(16.1%, 84.0%)	67.8%	(62.8%, 72.4%)
Prince William County	51153	70.6%	(63.7%, 76.7%)	71.8%	(69.0%, 74.4%)
Roanoke County	51161	67.6%	(57.5%, 76.3%)	74.7%	(71.7%, 77.6%)
Alexandria City	51510	70.2%	(58.5%, 79.7%)	76.0%	(69.8%, 81.3%)
Charlottesville City	51540	40.8%	(24.0%, 60.2%)	72.6%	(64.3%, 79.5%)
Covington City	51580	100.0%	(6.0%, 100.0%)	73.5%	(65.8%, 80.0%)
Fairfax City	51600	75.8%	(58.9%, 87.3%)	76.1%	(71.4%, 80.1%)
Falls Church City	51610	79.8%	(49.6%, 94.1%)	81.9%	(74.7%, 87.3%)
Lynchburg City	51680	63.9%	(50.2%, 75.7%)	69.6%	(64.8%, 74.1%)
Manassas City	51683	42.7%	(22.1%, 66.1%)	64.5%	(59.5%, 69.2%)
Manassas Park City	51685	74.4%	(30.4%, 93.3%)	63.6%	(52.8%, 73.1%)
Salem City	51775	75.7%	(40.9%, 93.3%)	69.0%	(65.3%, 72.4%)

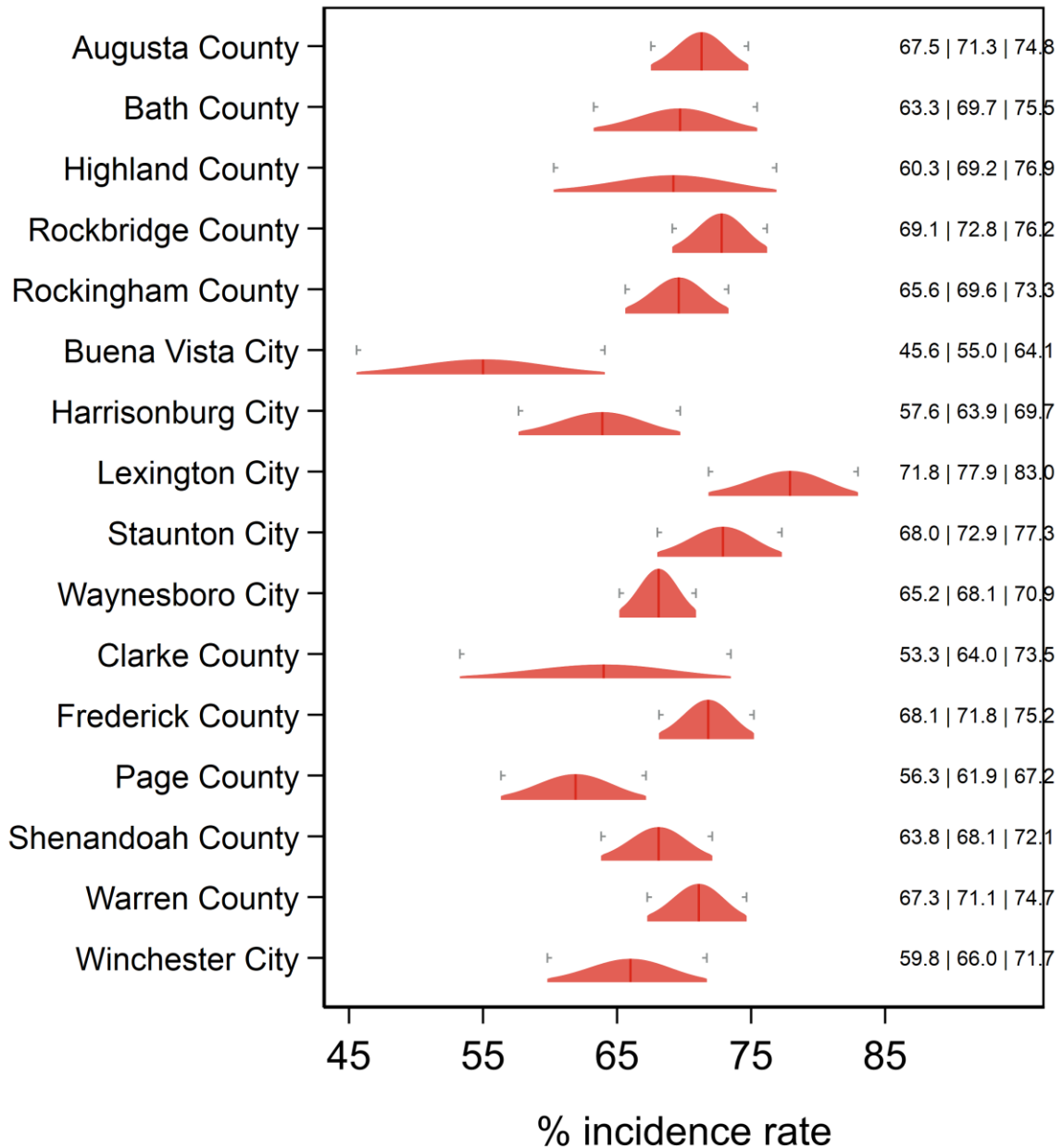
County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Bland County	51021	48.9%	(11.6%, 87.5%)	70.2%	(65.4%, 74.6%)
Buchanan County	51027	26.9%	(12.8%, 48.0%)	61.2%	(52.3%, 69.5%)
Carroll County	51035	56.9%	(33.3%, 77.7%)	64.6%	(60.2%, 68.7%)
Dickenson County	51051	48.1%	(25.5%, 71.6%)	63.8%	(53.6%, 72.9%)
Floyd County	51063	33.1%	(15.5%, 57.2%)	67.0%	(63.8%, 70.0%)
Franklin County	51067	75.4%	(60.2%, 86.1%)	69.0%	(65.9%, 71.9%)
Giles County	51071	85.1%	(45.6%, 94.1%)	69.4%	(63.9%, 74.4%)
Grayson County	51077	55.4%	(30.4%, 77.9%)	58.0%	(49.8%, 65.7%)
Henry County	51089	65.9%	(52.4%, 77.3%)	62.0%	(58.4%, 65.5%)
Lee County	51105	53.1%	(30.9%, 74.1%)	63.0%	(55.9%, 69.6%)
Montgomery County	51121	65.5%	(54.1%, 75.4%)	72.1%	(67.6%, 76.3%)
Patrick County	51141	73.9%	(48.9%, 89.3%)	60.8%	(55.4%, 65.9%)
Pittsylvania County	51143	67.8%	(55.4%, 78.0%)	63.7%	(60.3%, 67.0%)
Pulaski County	51155	65.4%	(47.3%, 80.0%)	67.7%	(64.0%, 71.2%)
Russell County	51167	69.6%	(51.3%, 83.3%)	67.0%	(63.3%, 70.6%)
Scott County	51169	43.3%	(30.3%, 57.4%)	60.9%	(54.3%, 67.1%)
Smyth County	51173	65.2%	(46.8%, 80.0%)	66.1%	(62.6%, 69.5%)
Tazewell County	51185	61.4%	(47.2%, 73.9%)	68.4%	(63.5%, 72.8%)
Washington County	51191	62.8%	(49.4%, 74.4%)	69.6%	(65.8%, 73.1%)
Wise County	51195	62.6%	(49.0%, 74.5%)	63.0%	(58.0%, 67.7%)
Wythe County	51197	67.0%	(46.1%, 82.8%)	68.1%	(64.9%, 71.2%)
Bristol City	51520	57.5%	(15.3%, 91.0%)	70.3%	(63.1%, 76.7%)
Danville City	51590	61.9%	(35.6%, 82.7%)	66.4%	(61.4%, 71.0%)
Galax City	51640	100.0%	(7.8%, 100.0%)	67.5%	(58.5%, 75.4%)
Martinsville City	51690	31.9%	(10.6%, 68.2%)	67.1%	(58.5%, 74.6%)
Norton City	51720	88.0%	(5.1%, 99.5%)	70.4%	(61.9%, 77.7%)
Radford City	51750	68.5%	(43.4%, 86.0%)	69.6%	(60.2%, 77.6%)
Roanoke City	51770	64.6%	(50.7%, 76.4%)	63.5%	(59.5%, 67.4%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Amelia County	51007	73.9%	(45.7%, 90.5%)	62.7%	(57.9%, 67.3%)
Brunswick County	51025	68.5%	(44.7%, 85.5%)	62.6%	(58.2%, 66.7%)
Buckingham County	51029	61.9%	(34.9%, 83.1%)	54.6%	(46.5%, 62.5%)
Charles City County	51036	96.0%	(20.5%, 99.2%)	67.2%	(62.6%, 71.5%)
Charlotte County	51037	51.5%	(26.8%, 75.6%)	65.0%	(59.4%, 70.2%)
Chesterfield County	51041	68.4%	(60.8%, 75.2%)	72.7%	(70.3%, 75.1%)
Cumberland County	51049	63.2%	(31.4%, 86.6%)	64.3%	(60.0%, 68.4%)
Dinwiddie County	51053	60.5%	(41.5%, 76.7%)	65.2%	(61.6%, 68.7%)
Goochland County	51075	73.4%	(33.6%, 93.8%)	75.7%	(72.0%, 79.1%)
Greensville County	51081	82.5%	(53.8%, 92.5%)	62.1%	(55.8%, 68.1%)
Halifax County	51083	73.2%	(58.3%, 84.2%)	63.6%	(60.2%, 66.9%)
Hanover County	51085	77.7%	(62.8%, 87.8%)	75.3%	(72.1%, 78.3%)
Henrico County	51087	75.6%	(67.4%, 82.3%)	73.1%	(70.3%, 75.8%)
Lunenburg County	51111	68.0%	(42.4%, 85.9%)	60.4%	(56.5%, 64.2%)
Mecklenburg County	51117	67.3%	(52.5%, 79.4%)	67.9%	(64.1%, 71.5%)
New Kent County	51127	78.9%	(55.7%, 91.7%)	72.6%	(69.1%, 75.9%)
Nottoway County	51135	59.8%	(36.3%, 79.5%)	61.2%	(56.3%, 65.9%)
Powhatan County	51145	82.2%	(52.6%, 95.0%)	73.5%	(70.1%, 76.6%)
Prince Edward County	51147	72.9%	(52.5%, 86.7%)	63.9%	(57.6%, 69.7%)
Prince George County	51149	88.2%	(71.5%, 93.2%)	66.5%	(63.2%, 69.5%)
Surry County	51181	56.0%	(18.8%, 87.5%)	66.3%	(62.4%, 70.0%)
Sussex County	51183	83.3%	(56.0%, 95.2%)	61.9%	(55.4%, 68.1%)
Colonial Heights City	51570	66.4%	(38.4%, 86.2%)	65.4%	(61.2%, 69.3%)
Emporia City	51595	100.0%	(17.4%, 100.0%)	59.0%	(52.9%, 64.9%)
Hopewell City	51670	73.4%	(50.8%, 88.1%)	65.1%	(58.5%, 71.2%)

Petersburg City	51730	69.7%	(46.9%, 85.7%)	60.3%	(53.8%, 66.5%)
Richmond City	51760	66.2%	(55.6%, 75.4%)	67.0%	(61.7%, 71.8%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Accomack County	51001	65.0%	(50.9%, 76.8%)	58.7%	(50.3%, 66.5%)
Essex County	51057	71.7%	(48.9%, 87.0%)	67.2%	(63.1%, 71.1%)
Gloucester County	51073	56.1%	(39.1%, 71.8%)	71.1%	(67.0%, 74.8%)
Isle of Wight County	51093	62.1%	(41.2%, 79.3%)	68.0%	(64.6%, 71.2%)
James City County	51095	85.4%	(73.5%, 92.5%)	79.0%	(75.2%, 82.3%)
King and Queen County	51097	83.0%	(39.4%, 95.4%)	66.9%	(63.9%, 69.7%)
King William County	51101	68.2%	(40.3%, 87.2%)	66.7%	(63.3%, 70.0%)
Lancaster County	51103	69.8%	(45.2%, 86.6%)	75.1%	(70.4%, 79.3%)
Mathews County	51115	71.4%	(48.5%, 86.9%)	72.2%	(68.3%, 75.7%)
Middlesex County	51119	41.6%	(19.1%, 68.2%)	73.7%	(67.6%, 79.0%)
Northampton County	51131	72.6%	(51.5%, 86.9%)	65.8%	(62.3%, 69.1%)
Northumberland County	51133	66.5%	(42.8%, 84.1%)	73.8%	(68.8%, 78.2%)
Richmond County	51159	42.6%	(26.6%, 60.2%)	60.6%	(55.6%, 65.4%)
Southampton County	51175	65.3%	(39.1%, 84.6%)	65.2%	(61.1%, 69.0%)
Westmoreland County	51193	50.8%	(31.1%, 70.2%)	60.6%	(54.2%, 66.7%)
York County	51199	84.8%	(72.2%, 92.2%)	76.8%	(73.3%, 80.0%)
Chesapeake City	51550	73.0%	(65.5%, 79.4%)	72.0%	(69.1%, 74.7%)
Franklin City	51620	84.4%	(48.0%, 96.9%)	62.6%	(59.0%, 66.1%)
Hampton City	51650	63.2%	(53.7%, 71.8%)	63.5%	(59.1%, 67.7%)
Newport News City	51700	69.6%	(60.3%, 77.6%)	66.8%	(63.3%, 70.2%)
Norfolk City	51710	57.5%	(48.9%, 65.6%)	62.7%	(59.3%, 66.0%)
Poquoson City	51735	47.4%	(16.9%, 79.9%)	75.0%	(71.3%, 78.3%)
Portsmouth City	51740	57.6%	(46.0%, 68.3%)	62.6%	(59.1%, 65.9%)
Suffolk City	51800	70.5%	(57.2%, 81.0%)	68.7%	(66.0%, 71.2%)
Virginia Beach City	51810	71.1%	(64.5%, 77.0%)	72.2%	(70.0%, 74.2%)
Williamsburg City	51830	75.3%	(38.8%, 93.6%)	75.2%	(69.8%, 80.0%)

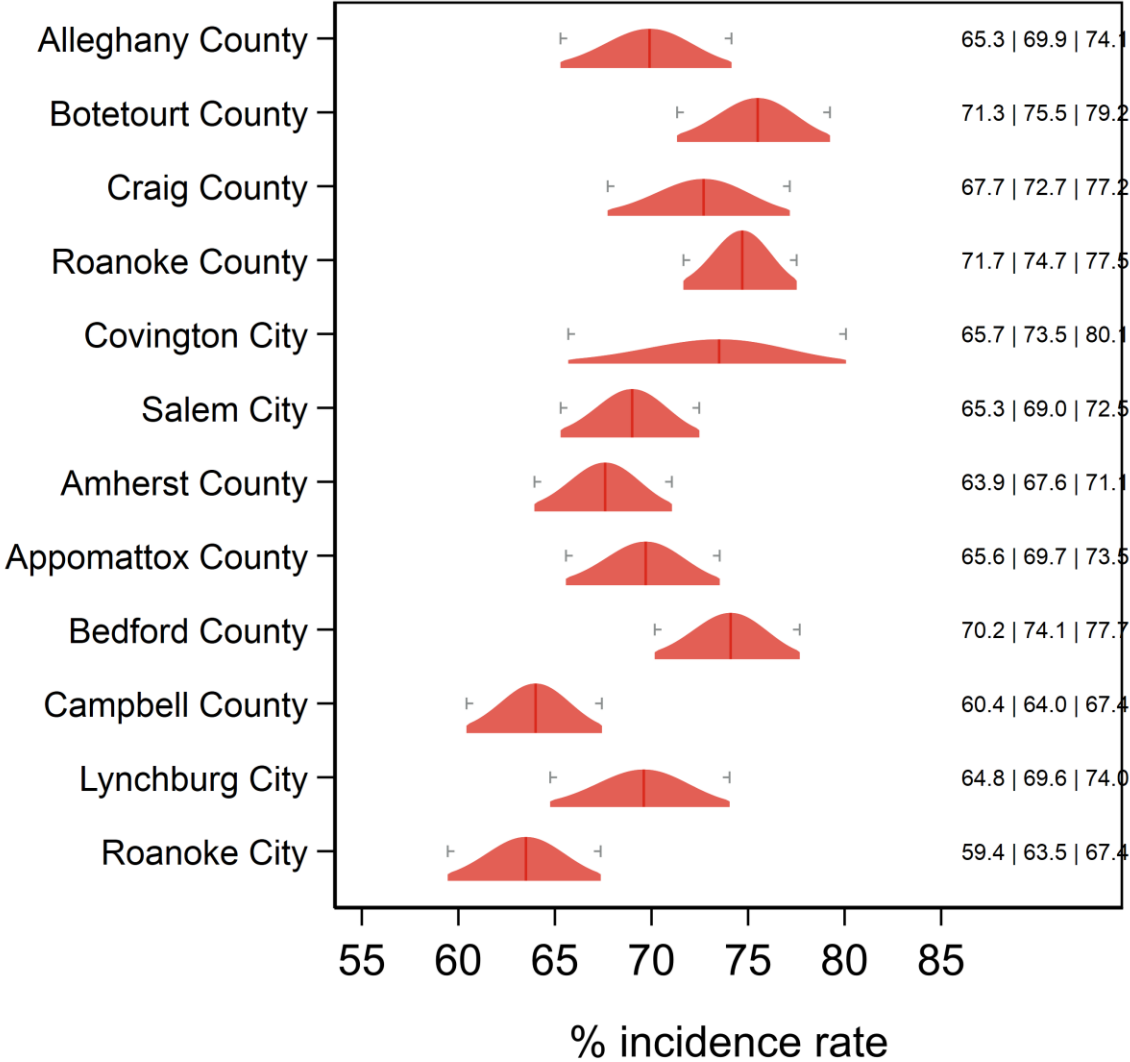
Dental visit in the past year Central Shenandoah and Lord Fairfax HDs



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

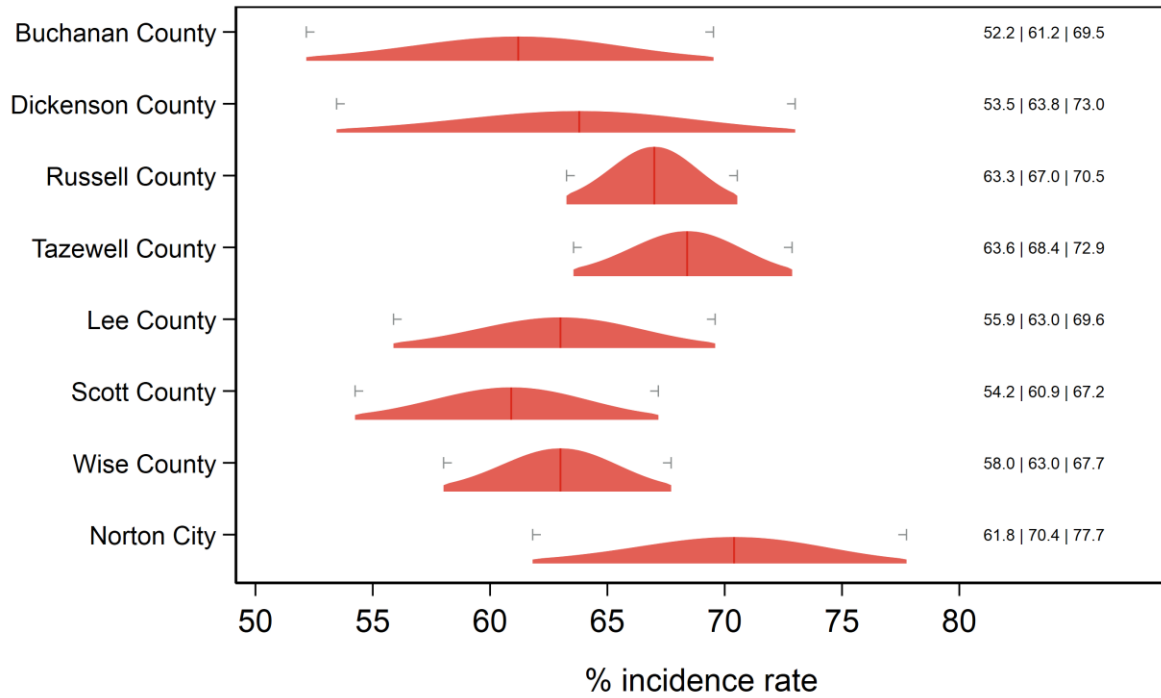
Dental visit in the past year

Alleghany, Roanoke and Central Virginia HDs



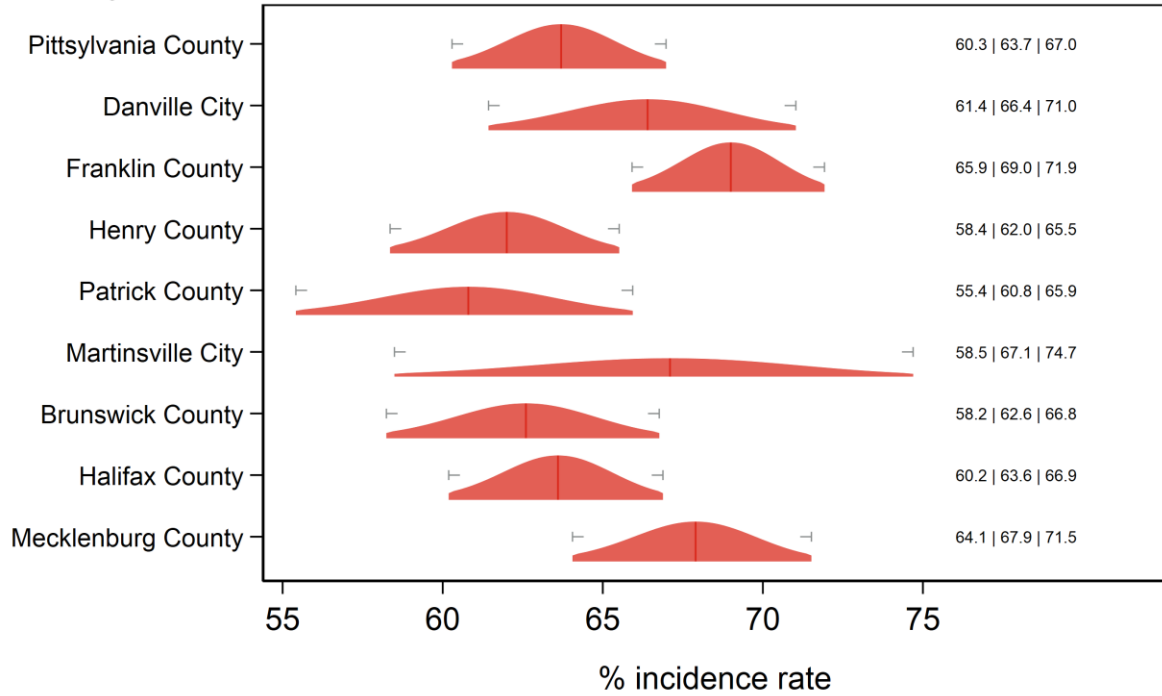
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Dental visit in the past year Cumberland Plateau and Lenowisco HDs



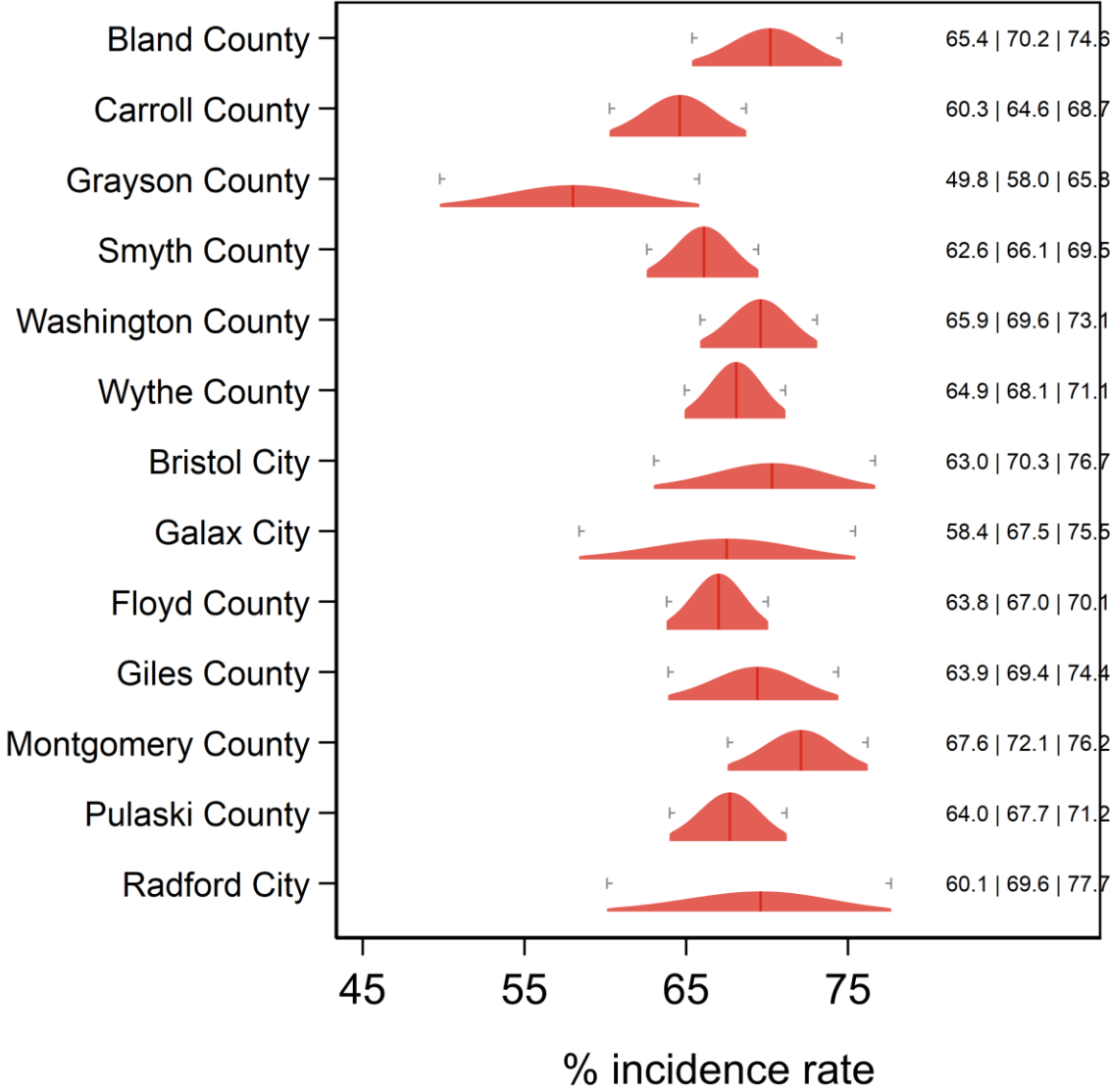
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Dental visit in the past year Pittsylvania/Danville, Southside and West Piedmont HDs



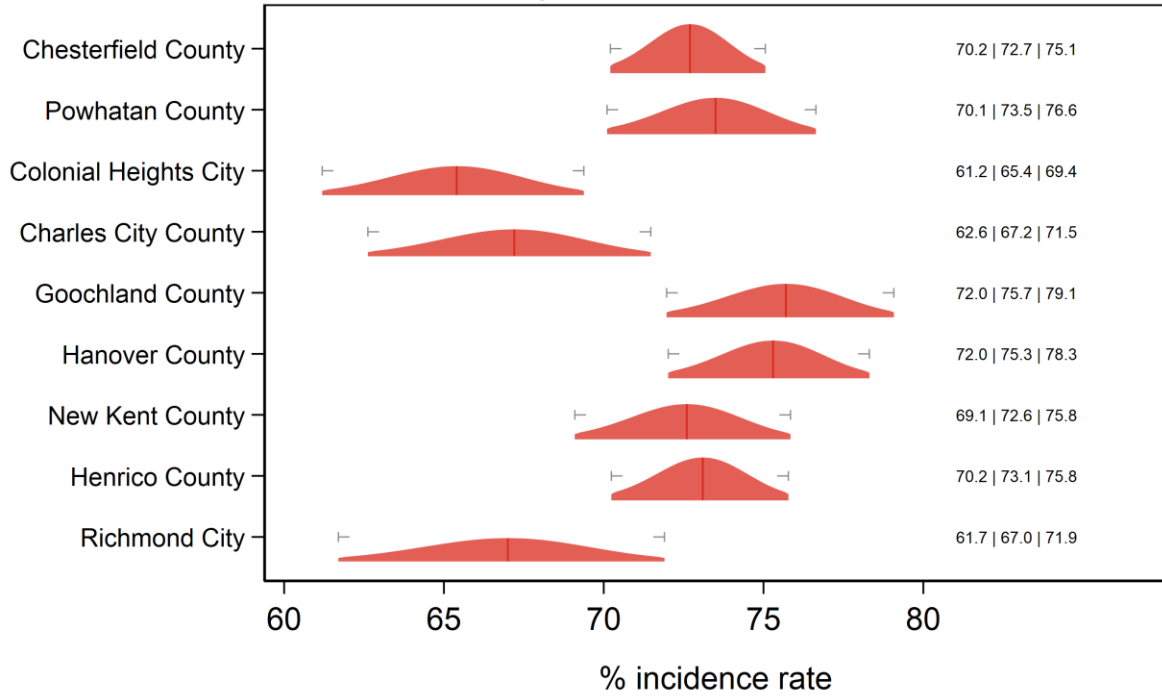
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Dental visit in the past year New River and Mount Rogers HDs



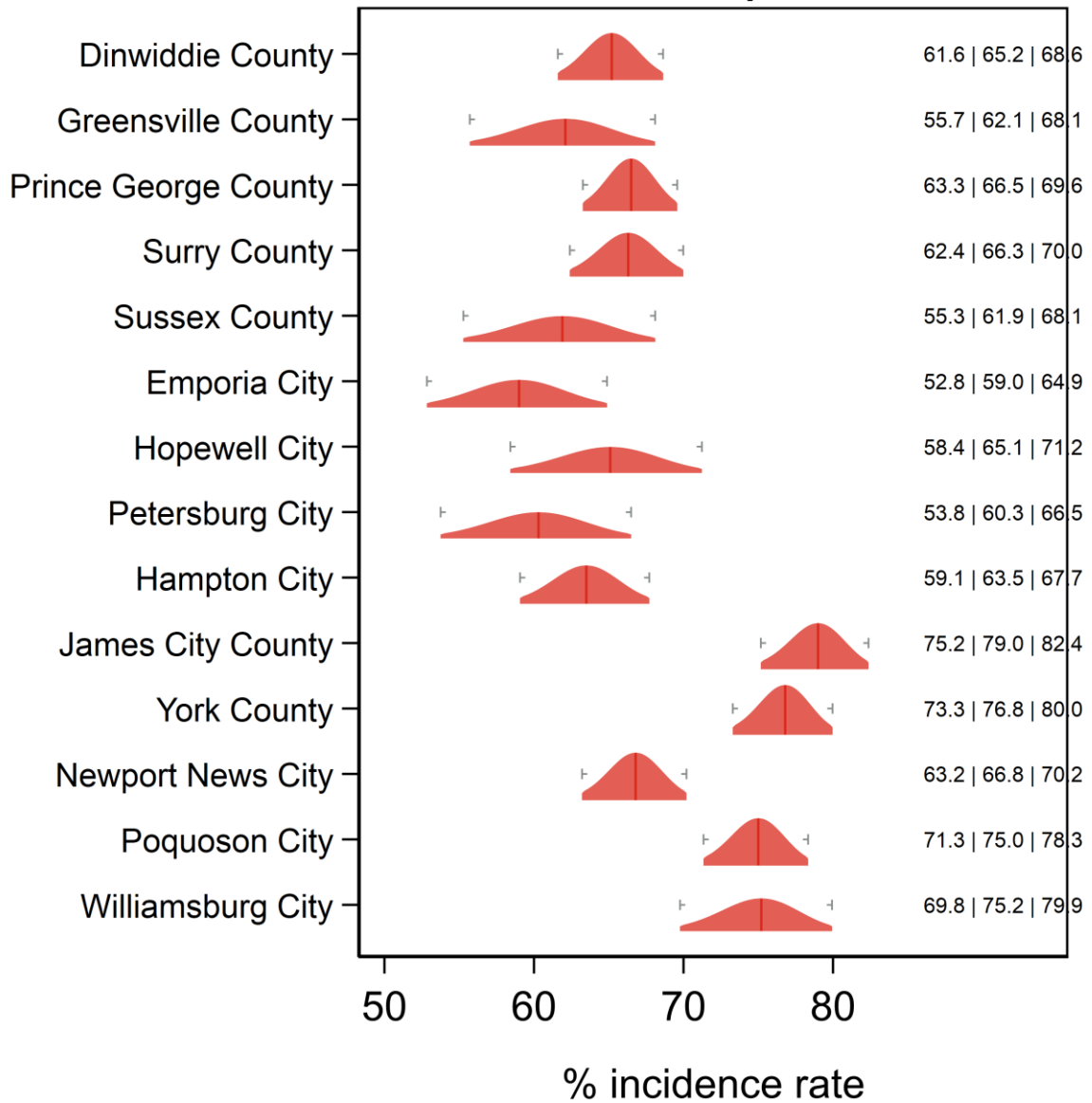
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Dental visit in the past year Chesterfield, Chickahominy, Henrico and Richmond HDs



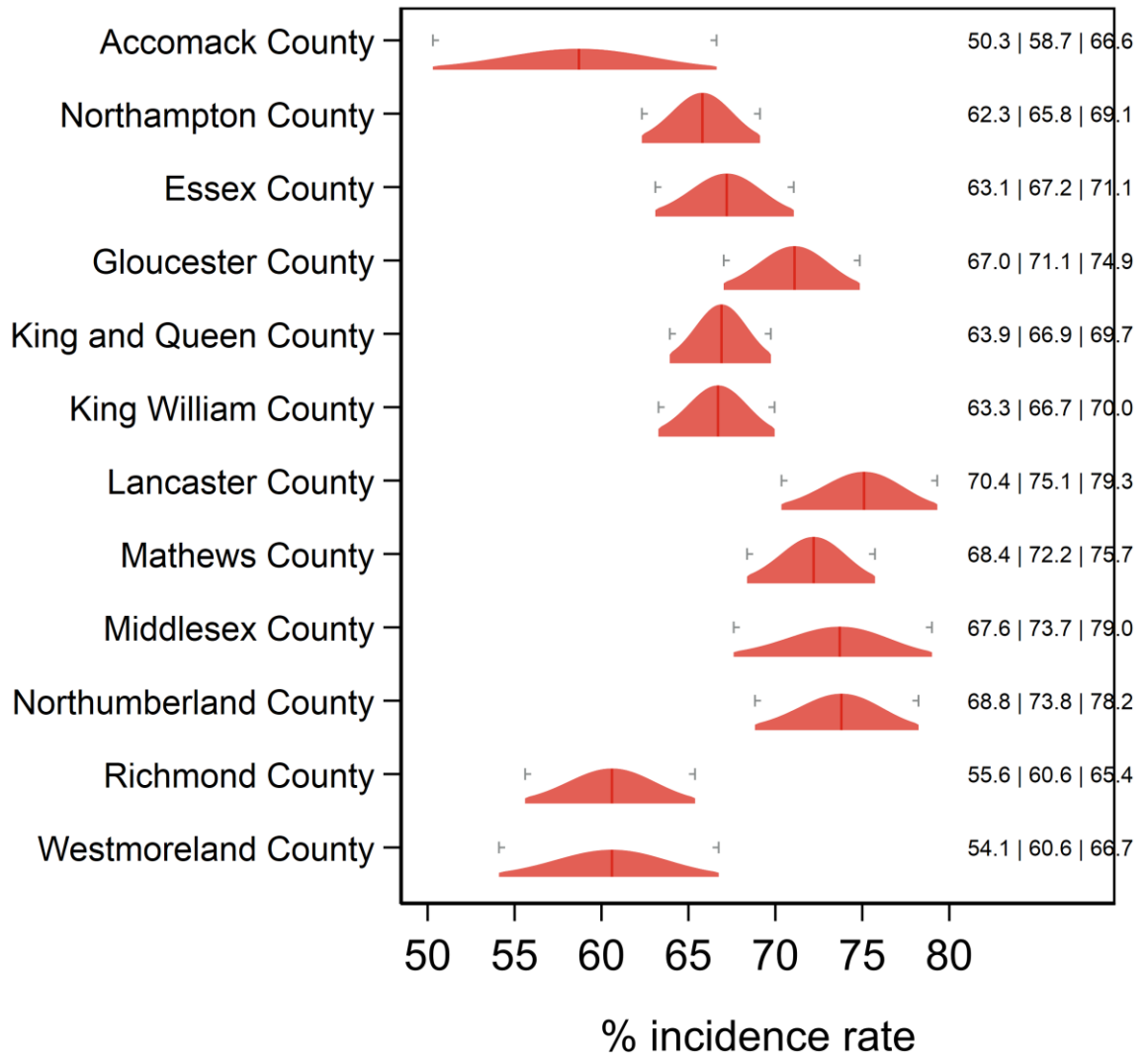
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Dental visit in the past year Crater, Peninsula and Hampton HDs



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

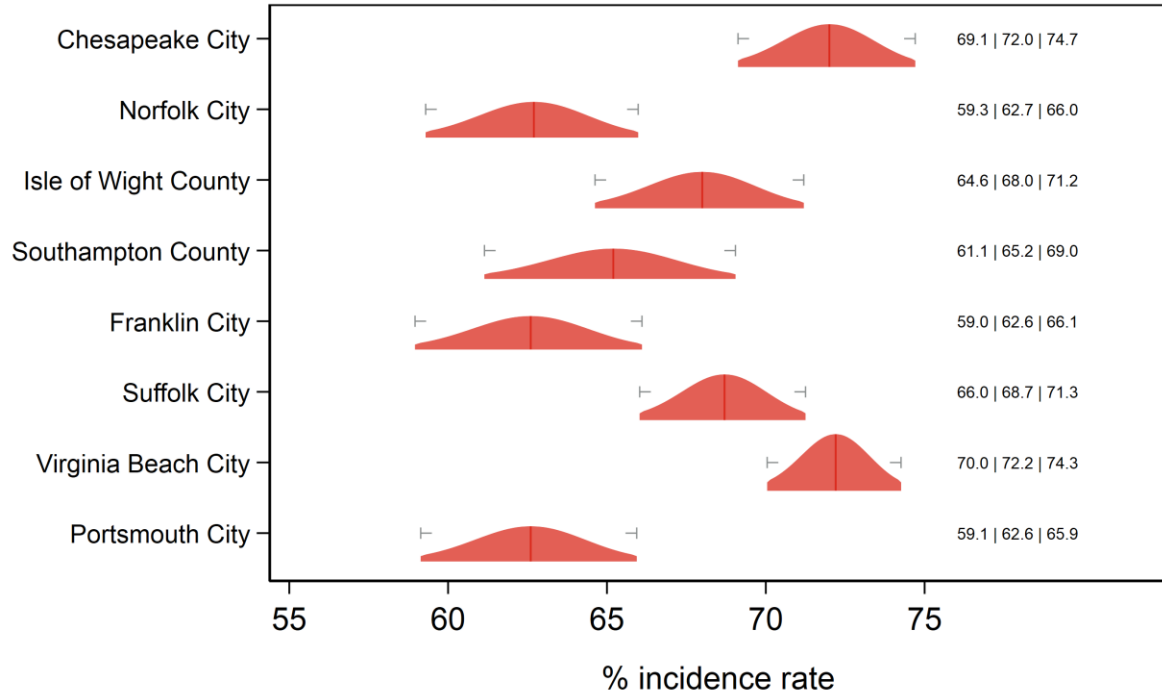
Dental visit in the past year Eastern Shore and Three Rivers HDs



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

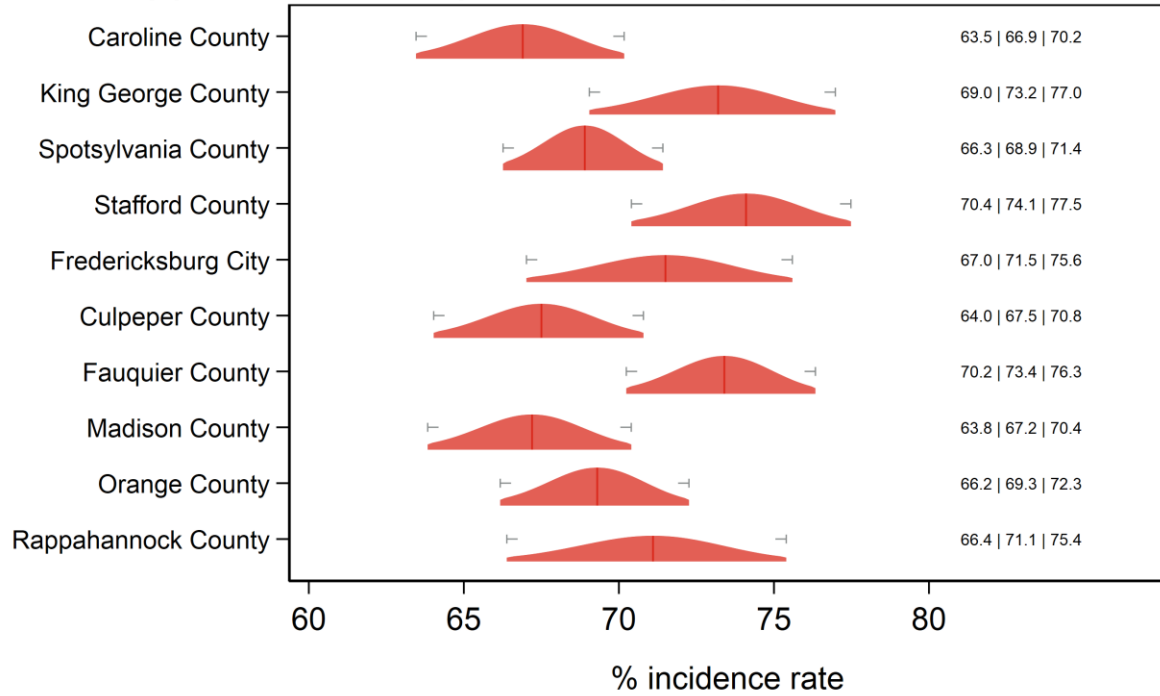
Dental visit in the past year

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

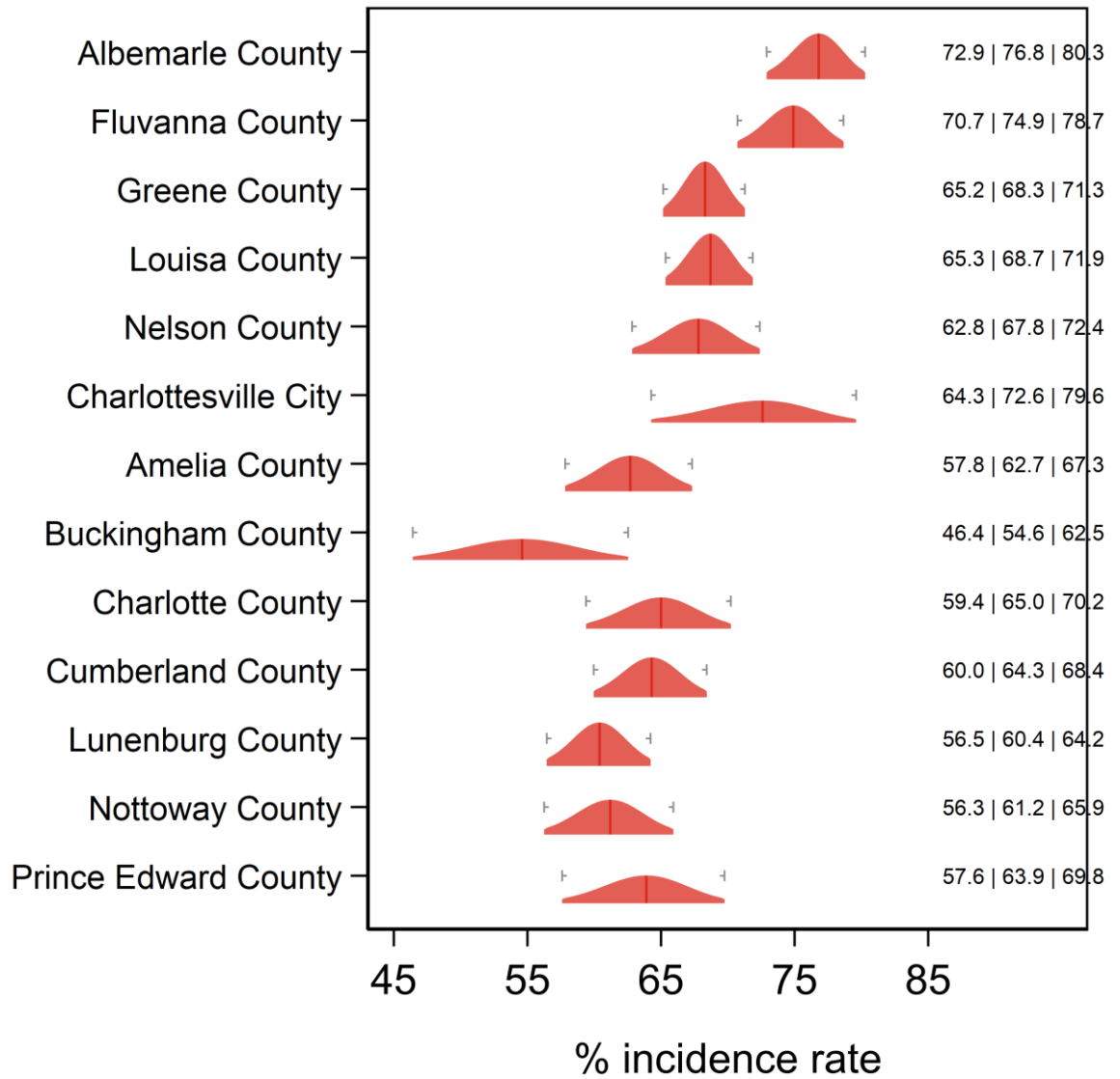
Dental visit in the past year Rappahannock/Rapidan and Rappahannock HDs



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

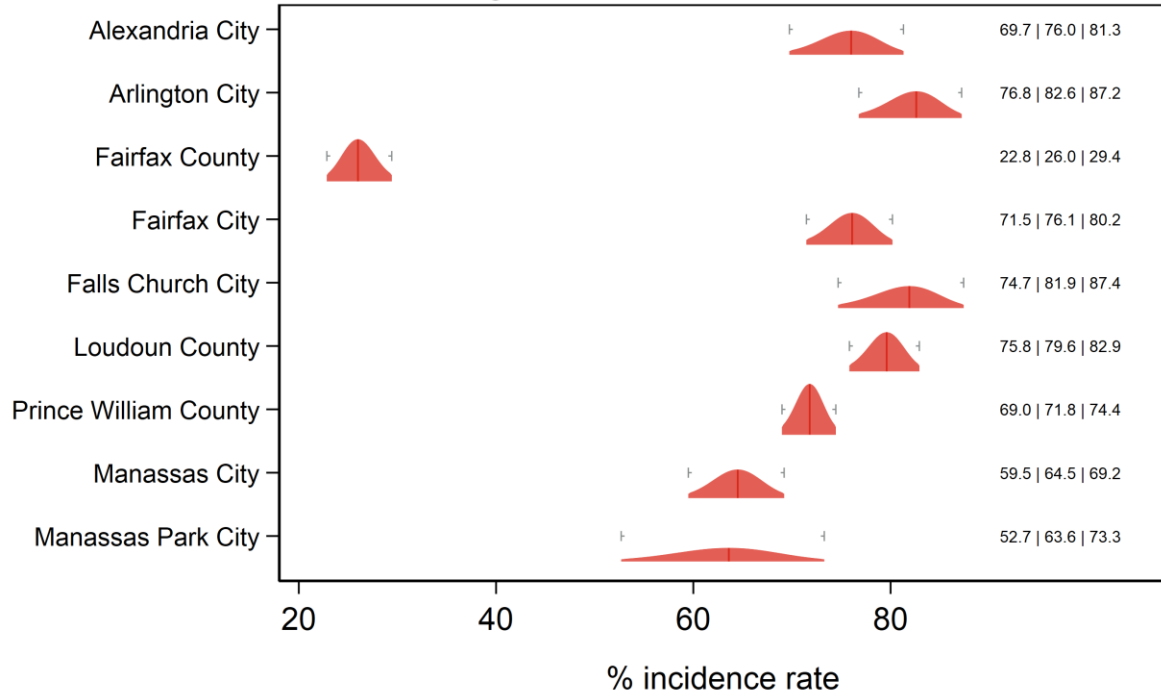
Dental visit in the past year

Thomas Jefferson and Piedmont HDs



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

Dental visit in the past year 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: 41 areas.

Direct estimate is outside the 95% SAE Wilson CI: 92 areas.

SAE estimate is inside the 95% direct Wilson CI: 124 areas.

SAE estimate is outside the 95% direct Wilson CI: 9 areas.

SAE Wilson 95% CI is fully inside the 95% direct Wilson CI: 109 areas.

SAE Wilson 95% CI partially overlaps with the 95% direct Wilson CI: 24 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: 129 areas.

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

Direct standard error is zero: 4 areas.

Proportion of SAE variance due to ACS sampling error: min = 3.33%; med = 25.04%; max = 61.90%.

Proportion of SAE variance due to sampling error in regression coefficient estimates: min = 24.76%; med = 67.39%; max = 94.62%.

Proportion of SAE variance due to model selection: min = 0.04%; med = 2.04%; max = 70.73%.

Proportion of SAE variance due to area random effects: min = 0.04%; med = 0.42%; max = 1.26%.