



Indicator 28: Visited a Dentist, Dental Hygienist or Dental Clinic in the Past Year

Internal variable name: outc28_dentist

Section 1: Definition

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

Section 2: Predictive models

	Mixed, demos only	Logit, no area effects	Mixed with area covariates
	b/se	b/se	b/se
Outcome 28: Visited a dentist, dental hygienist or dental clinic in the past year			
Non-Hispanic Black vs. Non-Hispanic White	-0.4491*** (0.1021)	-0.4070*** (0.0878)	-0.4070*** (0.0981)
Non-Hispanic Asian vs. Non-Hispanic White	-0.3434 (0.2253)	-0.3848* (0.1932)	-0.3848 (0.2242)
Non-Hispanic Other vs. Non-Hispanic White	-0.4146** (0.1295)	-0.4025** (0.1434)	-0.4025** (0.1274)
Hispanic vs. Non-Hispanic White	-0.5168** (0.1709)	-0.5744*** (0.1521)	-0.5744** (0.1716)
Female	0.1746** (0.0638)	0.1857** (0.0647)	0.1857** (0.0634)
Age 18-24 vs. 65+	0.0009 (0.1240)	0.0210 (0.1318)	0.0210 (0.1266)
Age 25-34 vs. 65+	-0.1650 (0.1191)	-0.1608 (0.1037)	-0.1608 (0.1209)
Age 35-44 vs. 65+	-0.0982 (0.0981)	-0.0872 (0.0975)	-0.0872 (0.0989)
Age 45-54 vs. 65+	0.0437 (0.0903)	0.0302 (0.0896)	0.0302 (0.0888)
Age 55-64 vs. 65+	0.1238 (0.0853)	0.1253 (0.0842)	0.1253 (0.0847)
% education Bachelor+, population 25+ years old		0.0140*** (0.0037)	0.0140*** (0.0033)
% below 1.5x poverty line		-0.0230*** (0.0051)	-0.0230*** (0.0046)
Crude mortality rate of nephritis nephrotic syndrome per 10,000		0.0934** (0.0299)	0.0934*** (0.0262)

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Esophagus Cancer Female Rate		-0.0202 (0.0139)	-0.0202 (0.0124)
Crude mortality rate of chronic lower respiratory disease per 10,000		-0.0667*** (0.0196)	-0.0667*** (0.0157)
Historic SAE: ever smoking rate		0.0592 (0.0692)	0.0592 (0.0526)
Square of {Historic SAE: ever smoking rate}		-0.0005 (0.0008)	-0.0005 (0.0006)
Stomach Cancer Female Rate		0.0124 (0.0160)	0.0124 (0.0159)
Crude mortality rate of Alzheimer's disease per 10,000		0.0327 (0.0281)	0.0327 (0.0272)
{Stomach Cancer Female Rate} interacted with {Crude mortality rate of Alzheimer's disease per 10,000}		0.0016 (0.0049)	0.0016 (0.0051)
Intercept	0.8182*** (0.0981)	-0.7804 (1.6015)	-0.7806 (1.1779)
Area effect variance	0.1014** (0.0327)		0.0000 (0.0000)

Number of alternative models used to estimate model error = 15.

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Section 3: Results

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Augusta County	51015	65.7%	(56.2%, 74.2%)	67.3%	(64.2%, 70.3%)
Bath County	51017	88.2%	(53.3%, 96.3%)	79.3%	(67.8%, 87.5%)
Caroline County	51033	86.0%	(65.1%, 95.3%)	69.9%	(66.3%, 73.3%)
Clarke County	51043	73.4%	(45.4%, 90.1%)	77.8%	(73.4%, 81.7%)
Culpeper County	51047	57.2%	(42.2%, 71.0%)	67.9%	(63.9%, 71.7%)
Fauquier County	51061	80.6%	(68.8%, 88.7%)	74.6%	(71.5%, 77.5%)
Frederick County	51069	69.7%	(59.0%, 78.7%)	69.8%	(65.9%, 73.5%)
Highland County	51091	100.0%	(12.7%, 100.0%)	83.3%	(63.6%, 93.4%)
King George County	51099	88.2%	(62.1%, 97.2%)	78.3%	(74.3%, 81.9%)
Madison County	51113	69.8%	(47.0%, 85.7%)	65.9%	(60.6%, 70.9%)
Orange County	51137	60.1%	(41.7%, 76.1%)	67.4%	(63.7%, 70.9%)
Page County	51139	50.6%	(23.2%, 77.6%)	61.6%	(56.4%, 66.6%)
Rappahannock County	51157	46.3%	(21.9%, 72.6%)	64.1%	(54.4%, 72.9%)
Rockbridge County	51163	67.4%	(45.8%, 83.5%)	72.6%	(68.8%, 76.0%)
Rockingham County	51165	74.2%	(62.2%, 83.4%)	74.1%	(70.1%, 77.6%)
Shenandoah County	51171	58.3%	(41.6%, 73.2%)	63.6%	(59.3%, 67.6%)
Spotsylvania County	51177	61.4%	(48.6%, 72.8%)	67.9%	(63.4%, 72.2%)
Stafford County	51179	67.2%	(56.6%, 76.2%)	75.6%	(71.5%, 79.3%)
Warren County	51187	60.9%	(40.1%, 78.3%)	70.1%	(66.5%, 73.5%)
Buena Vista City	51530	100.0%	(10.4%, 100.0%)	59.1%	(54.3%, 63.7%)
Fredericksburg City	51630	61.5%	(36.5%, 81.6%)	71.2%	(66.5%, 75.4%)
Harrisonburg City	51660	15.6%	(6.0%, 47.6%)	60.2%	(52.2%, 67.6%)
Lexington City	51678	100.0%	(0.6%, 100.0%)	75.3%	(69.2%, 80.5%)
Staunton City	51790	100.0%	(57.8%, 100.0%)	78.9%	(63.0%, 89.1%)
Waynesboro City	51820	70.2%	(38.3%, 90.0%)	65.1%	(61.4%, 68.6%)
Winchester City	51840	50.2%	(25.9%, 74.4%)	56.7%	(50.9%, 62.3%)

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County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Albemarle County	51003	75.4%	(64.1%, 84.1%)	75.1%	(71.0%, 78.8%)
Alleghany County	51005	59.0%	(40.4%, 75.4%)	65.0%	(60.6%, 69.0%)
Amherst County	51009	77.6%	(57.4%, 89.9%)	69.0%	(63.0%, 74.5%)
Appomattox County	51011	53.7%	(31.3%, 74.7%)	62.7%	(58.4%, 66.9%)
Arlington City	51013	79.7%	(70.7%, 86.5%)	80.6%	(76.5%, 84.2%)
Bedford County	51019	68.0%	(55.2%, 78.6%)	73.1%	(69.9%, 76.0%)
Botetourt County	51023	79.3%	(63.2%, 89.5%)	76.1%	(70.2%, 81.1%)
Campbell County	51031	66.1%	(48.5%, 80.2%)	66.0%	(62.5%, 69.4%)
Craig County	51045	87.6%	(21.8%, 98.1%)	76.5%	(60.4%, 87.4%)
Fairfax County	51059	79.4%	(73.7%, 84.1%)	78.5%	(76.3%, 80.5%)
Fluvanna County	51065	53.3%	(30.1%, 75.2%)	69.6%	(65.6%, 73.4%)
Greene County	51079	58.6%	(33.5%, 79.9%)	68.8%	(64.2%, 73.0%)
Loudoun County	51107	77.0%	(69.7%, 83.0%)	78.3%	(75.7%, 80.6%)
Louisa County	51109	76.4%	(58.2%, 88.3%)	68.7%	(65.2%, 72.0%)
Nelson County	51125	67.0%	(43.2%, 84.4%)	72.2%	(67.3%, 76.6%)
Prince William County	51153	68.8%	(61.2%, 75.5%)	69.2%	(65.4%, 72.7%)
Roanoke County	51161	77.6%	(68.5%, 84.7%)	75.0%	(72.0%, 77.7%)
Alexandria City	51510	69.2%	(56.1%, 79.9%)	78.7%	(74.8%, 82.2%)
Charlottesville City	51540	70.2%	(40.2%, 89.2%)	70.2%	(64.7%, 75.1%)
Covington City	51580	100.0%	(0.6%, 100.0%)	70.6%	(58.5%, 80.3%)
Fairfax City	51600	78.9%	(68.2%, 86.7%)	73.3%	(69.0%, 77.1%)
Falls Church City	51610	98.8%	(37.2%, 99.6%)	84.9%	(80.5%, 88.4%)
Lynchburg City	51680	63.7%	(47.0%, 77.6%)	59.6%	(53.7%, 65.2%)
Manassas City	51683	86.8%	(54.0%, 96.4%)	61.1%	(54.9%, 67.0%)
Manassas Park City	51685	81.9%	(2.5%, 99.6%)	42.7%	(18.8%, 70.7%)
Salem City	51775	47.2%	(14.5%, 82.5%)	68.8%	(62.5%, 74.4%)

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County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Bland County	51021	57.4%	(20.6%, 87.5%)	71.6%	(66.0%, 76.6%)
Buchanan County	51027	51.1%	(35.7%, 66.4%)	52.1%	(45.5%, 58.6%)
Carroll County	51035	53.9%	(36.7%, 70.2%)	62.2%	(57.2%, 67.1%)
Dickenson County	51051	48.8%	(30.8%, 67.1%)	39.6%	(30.4%, 49.6%)
Floyd County	51063	65.4%	(44.5%, 81.6%)	68.1%	(63.9%, 72.1%)
Franklin County	51067	68.6%	(52.9%, 81.0%)	67.7%	(64.8%, 70.4%)
Giles County	51071	70.9%	(49.3%, 86.0%)	77.5%	(71.4%, 82.7%)
Grayson County	51077	72.0%	(44.4%, 89.2%)	61.9%	(50.9%, 71.8%)
Henry County	51089	58.5%	(44.9%, 70.9%)	59.8%	(56.1%, 63.5%)
Lee County	51105	35.5%	(18.6%, 57.0%)	50.0%	(44.5%, 55.5%)
Montgomery County	51121	62.2%	(48.9%, 73.8%)	67.0%	(61.2%, 72.3%)
Patrick County	51141	67.2%	(45.3%, 83.5%)	58.4%	(54.4%, 62.3%)
Pittsylvania County	51143	61.9%	(51.5%, 71.3%)	62.3%	(59.0%, 65.6%)
Pulaski County	51155	66.5%	(51.4%, 78.9%)	70.2%	(65.1%, 74.7%)
Russell County	51167	63.9%	(46.2%, 78.4%)	62.9%	(58.8%, 66.9%)
Scott County	51169	58.2%	(43.6%, 71.4%)	57.9%	(54.1%, 61.7%)
Smyth County	51173	64.9%	(47.4%, 79.2%)	61.5%	(58.2%, 64.8%)
Tazewell County	51185	59.4%	(45.7%, 71.9%)	60.3%	(55.7%, 64.7%)
Washington County	51191	64.4%	(50.3%, 76.4%)	72.3%	(69.0%, 75.5%)
Wise County	51195	57.7%	(44.4%, 69.9%)	55.9%	(49.6%, 62.0%)
Wythe County	51197	55.6%	(39.3%, 70.8%)	63.0%	(58.3%, 67.4%)
Bristol City	51520	57.9%	(23.3%, 86.2%)	56.7%	(48.9%, 64.1%)
Danville City	51590	61.1%	(37.6%, 80.4%)	61.0%	(56.0%, 65.8%)
Galax City	51640	17.8%	(2.3%, 78.9%)	55.9%	(40.8%, 70.1%)
Martinsville City	51690	49.3%	(15.2%, 84.1%)	47.7%	(40.3%, 55.1%)
Norton City	51720	57.4%	(6.5%, 96.3%)	48.4%	(39.1%, 57.8%)
Radford City	51750	53.1%	(13.3%, 89.3%)	51.7%	(42.2%, 61.0%)
Roanoke City	51770	62.2%	(51.3%, 72.0%)	64.2%	(60.9%, 67.3%)

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Amelia County	51007	63.5%	(32.9%, 86.0%)	57.1%	(51.6%, 62.5%)
Brunswick County	51025	46.7%	(25.0%, 69.7%)	57.0%	(47.5%, 66.0%)
Buckingham County	51029	61.9%	(38.4%, 80.9%)	57.5%	(51.7%, 63.0%)
Charles City County	51036	73.1%	(37.1%, 92.6%)	61.4%	(55.9%, 66.7%)
Charlotte County	51037	61.9%	(30.6%, 85.7%)	70.9%	(64.9%, 76.4%)
Chesterfield County	51041	70.6%	(63.7%, 76.6%)	72.8%	(70.4%, 75.1%)
Cumberland County	51049	80.7%	(49.7%, 94.7%)	58.4%	(51.6%, 65.0%)
Dinwiddie County	51053	79.6%	(57.4%, 91.9%)	64.0%	(59.6%, 68.1%)
Goochland County	51075	84.5%	(65.9%, 93.9%)	80.3%	(76.9%, 83.4%)
Greensville County	51081	76.9%	(43.7%, 93.4%)	65.2%	(58.3%, 71.5%)
Halifax County	51083	69.6%	(55.5%, 80.7%)	62.3%	(58.0%, 66.4%)
Hanover County	51085	81.2%	(70.8%, 88.5%)	77.6%	(74.5%, 80.5%)
Henrico County	51087	75.1%	(68.9%, 80.4%)	72.6%	(69.9%, 75.1%)
Lunenburg County	51111	56.6%	(27.5%, 81.8%)	57.9%	(54.0%, 61.8%)
Mecklenburg County	51117	57.6%	(40.9%, 72.7%)	68.0%	(61.8%, 73.7%)
New Kent County	51127	83.6%	(55.9%, 95.3%)	72.4%	(67.6%, 76.6%)
Nottoway County	51135	67.2%	(40.1%, 86.2%)	53.1%	(47.3%, 58.8%)
Powhatan County	51145	75.8%	(42.3%, 93.1%)	72.9%	(69.1%, 76.4%)
Prince Edward County	51147	44.0%	(23.8%, 66.3%)	51.2%	(45.9%, 56.5%)
Prince George County	51149	78.3%	(62.4%, 88.7%)	64.6%	(59.8%, 69.0%)
Surry County	51181	50.3%	(15.6%, 84.8%)	62.7%	(57.4%, 67.7%)
Sussex County	51183	44.6%	(21.8%, 69.9%)	50.2%	(43.0%, 57.3%)
Colonial Heights City	51570	74.0%	(34.0%, 94.1%)	59.3%	(52.6%, 65.6%)
Emporia City	51595	68.9%	(13.7%, 96.9%)	59.7%	(49.2%, 69.4%)
Hopewell City	51670	51.2%	(24.9%, 76.8%)	54.4%	(50.0%, 58.7%)
Petersburg City	51730	56.5%	(38.9%, 72.6%)	55.2%	(50.4%, 59.8%)
Richmond City	51760	63.2%	(54.2%, 71.3%)	64.6%	(60.9%, 68.1%)

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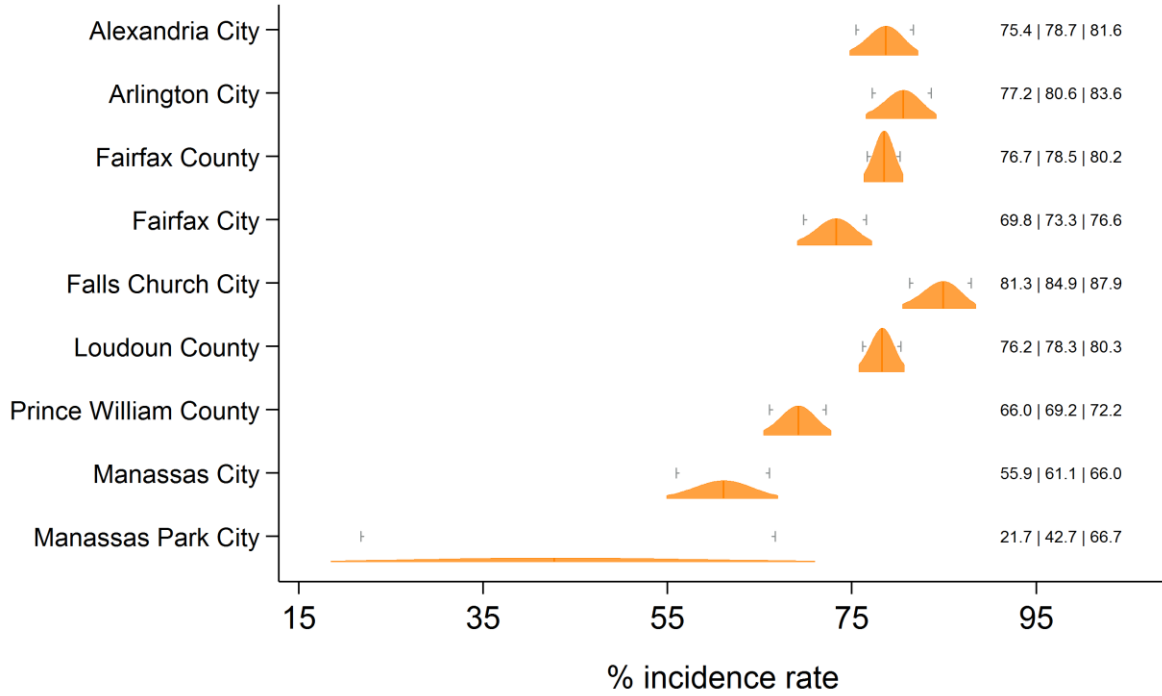


County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Accomack County	51001	74.2%	(59.5%, 84.9%)	66.5%	(60.1%, 72.4%)
Essex County	51057	79.0%	(44.1%, 94.7%)	69.9%	(55.4%, 81.3%)
Gloucester County	51073	70.9%	(52.1%, 84.5%)	70.8%	(67.5%, 73.9%)
Isle of Wight County	51093	77.4%	(61.5%, 88.0%)	69.9%	(66.3%, 73.3%)
James City County	51095	73.8%	(60.1%, 84.0%)	79.7%	(76.1%, 82.9%)
King and Queen County	51097	45.3%	(10.7%, 85.1%)	63.0%	(56.4%, 69.1%)
King William County	51101	53.7%	(29.0%, 76.7%)	63.7%	(59.7%, 67.4%)
Lancaster County	51103	51.5%	(25.7%, 76.6%)	76.6%	(67.1%, 84.1%)
Mathews County	51115	73.7%	(51.0%, 88.3%)	69.5%	(61.7%, 76.3%)
Middlesex County	51119	71.4%	(33.4%, 92.6%)	78.0%	(73.1%, 82.2%)
Northampton County	51131	77.9%	(57.3%, 90.3%)	67.3%	(60.6%, 73.4%)
Northumberland County	51133	75.5%	(49.8%, 90.6%)	80.1%	(74.0%, 85.1%)
Richmond County	51159	41.5%	(25.1%, 60.0%)	58.6%	(52.4%, 64.4%)
Southampton County	51175	70.0%	(40.0%, 89.1%)	60.4%	(55.0%, 65.5%)
Westmoreland County	51193	36.2%	(16.7%, 61.6%)	60.5%	(56.5%, 64.4%)
York County	51199	75.8%	(61.1%, 86.2%)	75.8%	(72.2%, 79.0%)
Chesapeake City	51550	77.5%	(70.0%, 83.6%)	70.8%	(67.9%, 73.6%)
Franklin City	51620	67.3%	(44.5%, 84.1%)	64.8%	(59.2%, 70.1%)
Hampton City	51650	69.8%	(60.3%, 77.9%)	64.4%	(61.0%, 67.7%)
Newport News City	51700	63.3%	(52.6%, 72.9%)	63.9%	(61.0%, 66.7%)
Norfolk City	51710	66.1%	(57.2%, 74.0%)	60.9%	(57.5%, 64.3%)
Poquoson City	51735	62.5%	(19.2%, 92.1%)	79.5%	(74.5%, 83.7%)
Portsmouth City	51740	61.4%	(49.5%, 72.0%)	64.6%	(61.1%, 67.9%)
Suffolk City	51800	61.1%	(48.1%, 72.7%)	68.3%	(65.3%, 71.3%)
Virginia Beach City	51810	72.3%	(65.6%, 78.1%)	71.3%	(68.8%, 73.7%)
Williamsburg City	51830	66.7%	(22.3%, 93.4%)	68.7%	(61.9%, 74.8%)



Section 4: Graphical representation

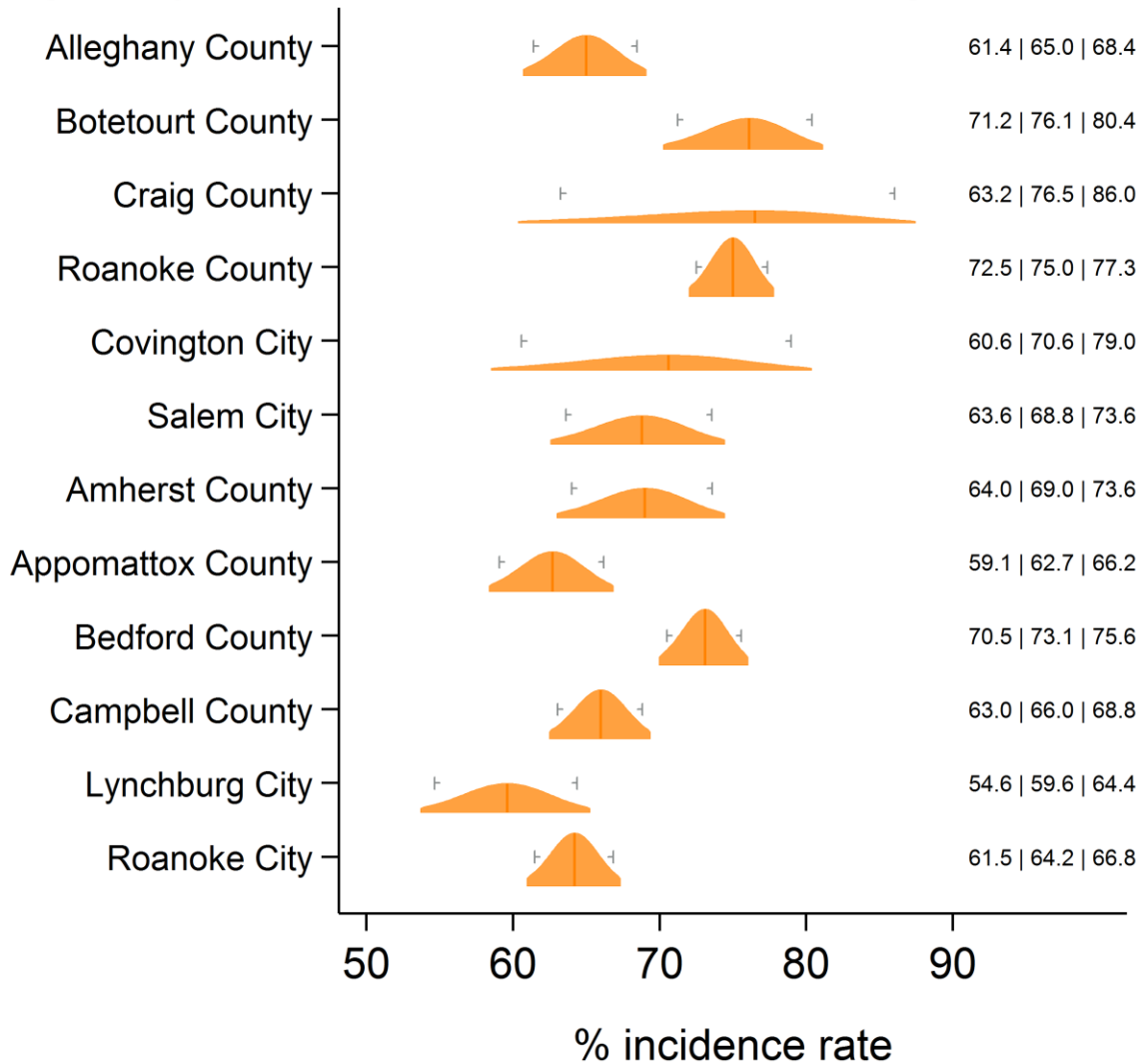
Dental visit past 12 months
Alexandria, Fairfax, Arlington, Loudon, Prince William HDs



Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval



Dental visit past 12 months Alleghany, Roanoke and Central Virginia HDs

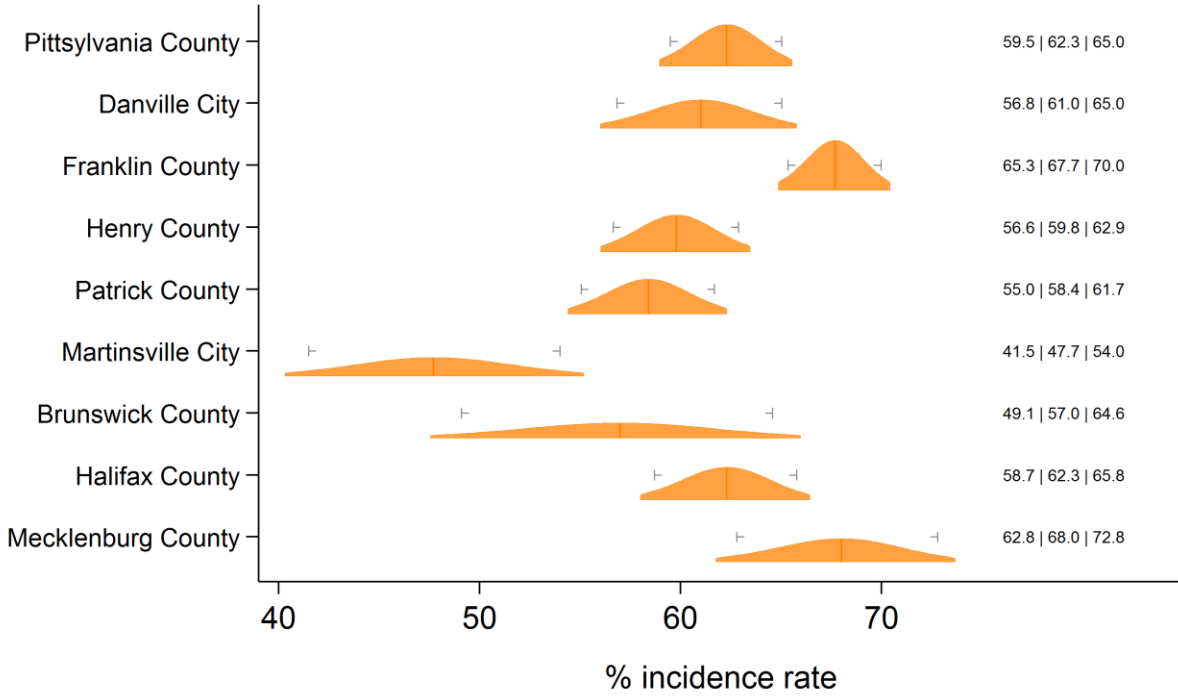


Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval

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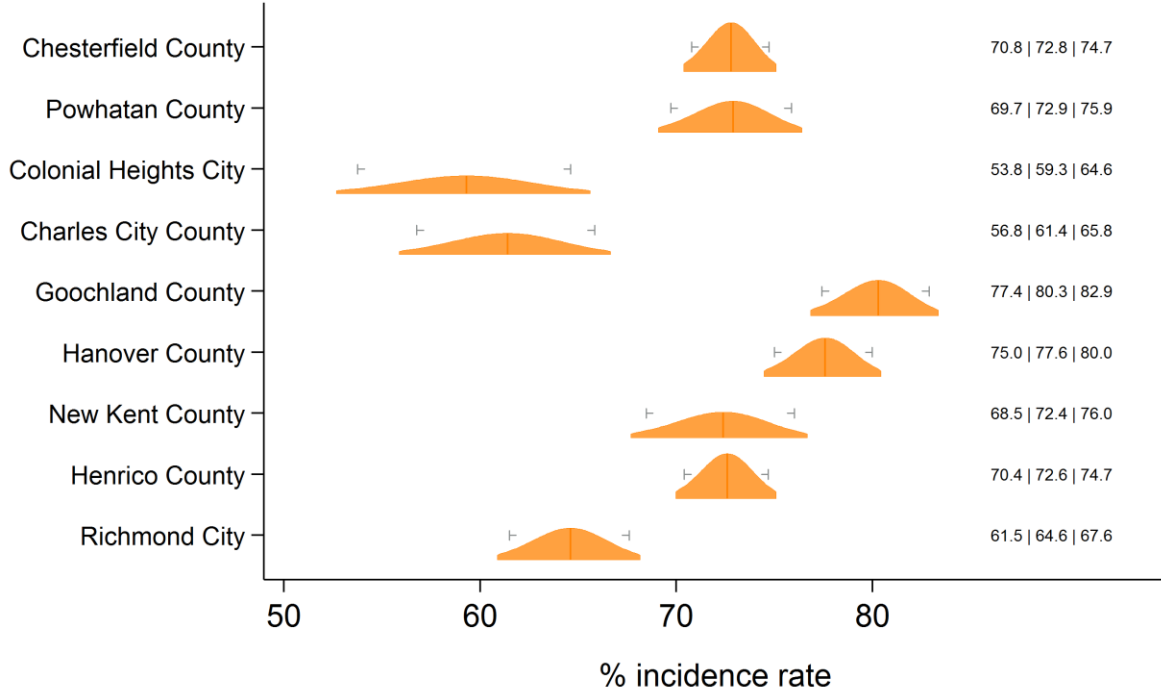
Dental visit past 12 months Pittsylvania/Danville, Southside and West Piedmont HDs



Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval



Dental visit past 12 months Chesterfield, Chickahominy, Henrico and Richmond HDs

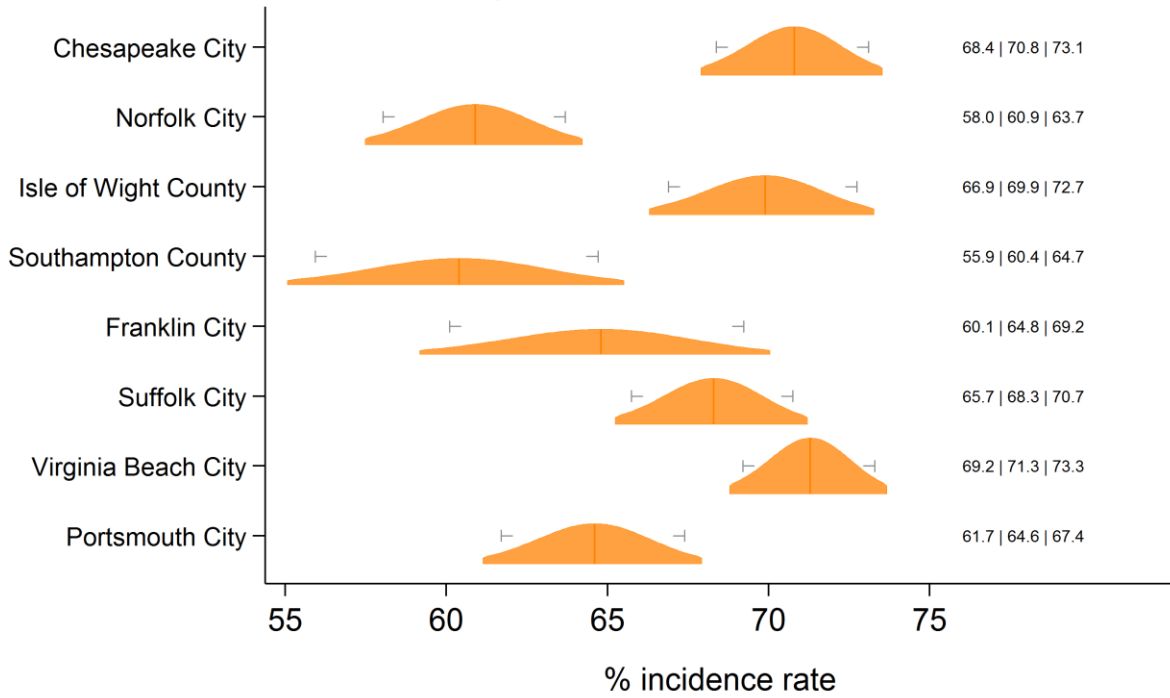


Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval

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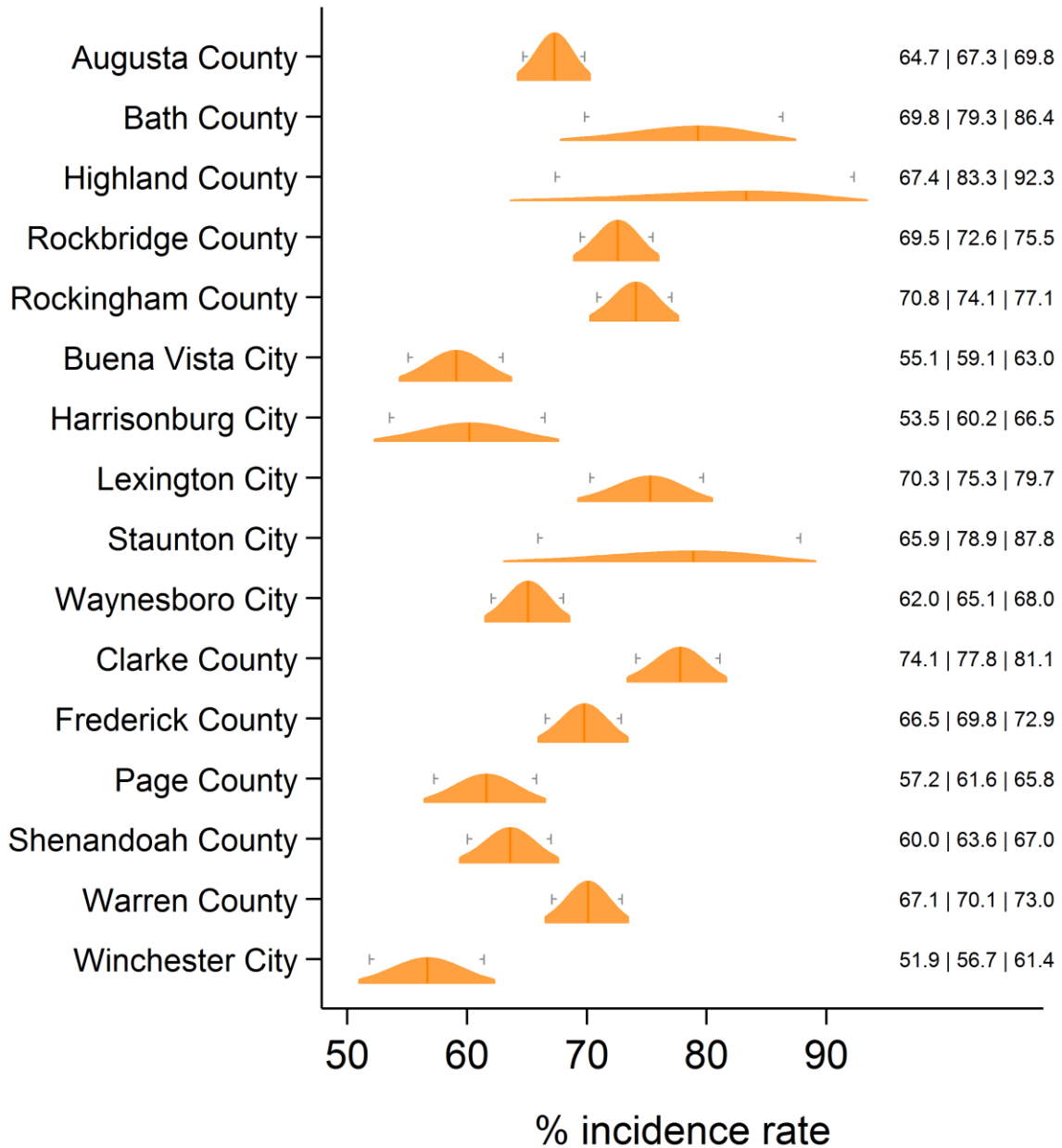
Dental visit past 12 months Norfolk, Portsmouth, Chesapeake, VA Beach, W. Tidewater HDs



Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval



Dental visit past 12 months Central Shenandoah and Lord Fairfax HDs

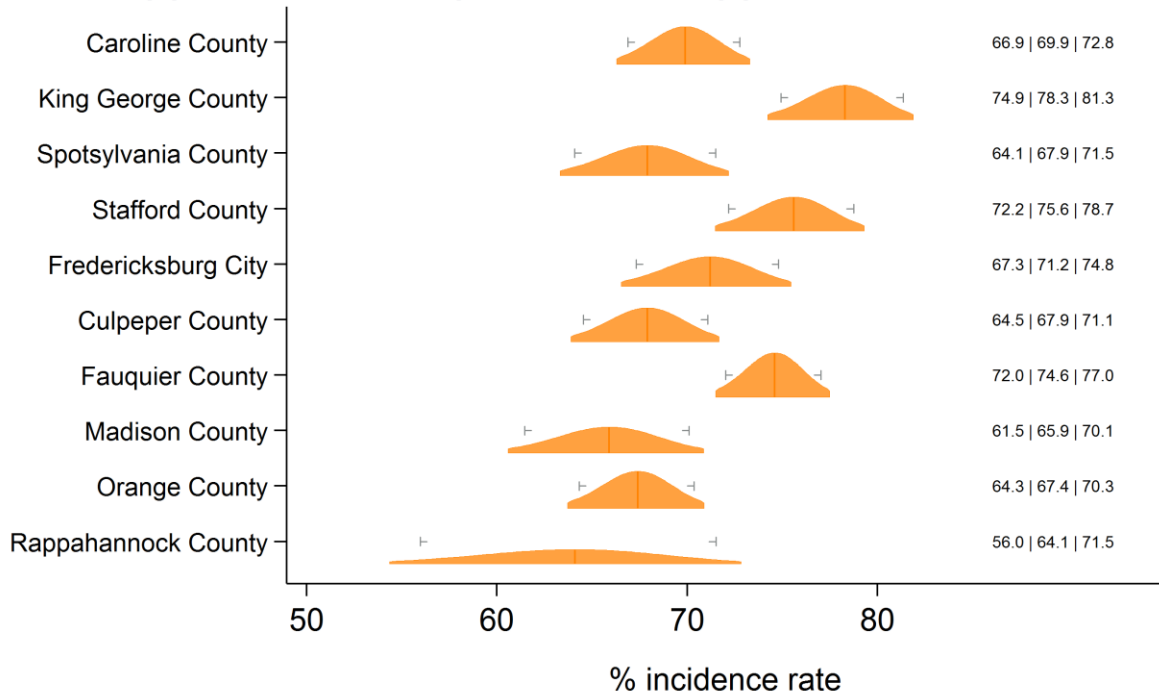


Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval

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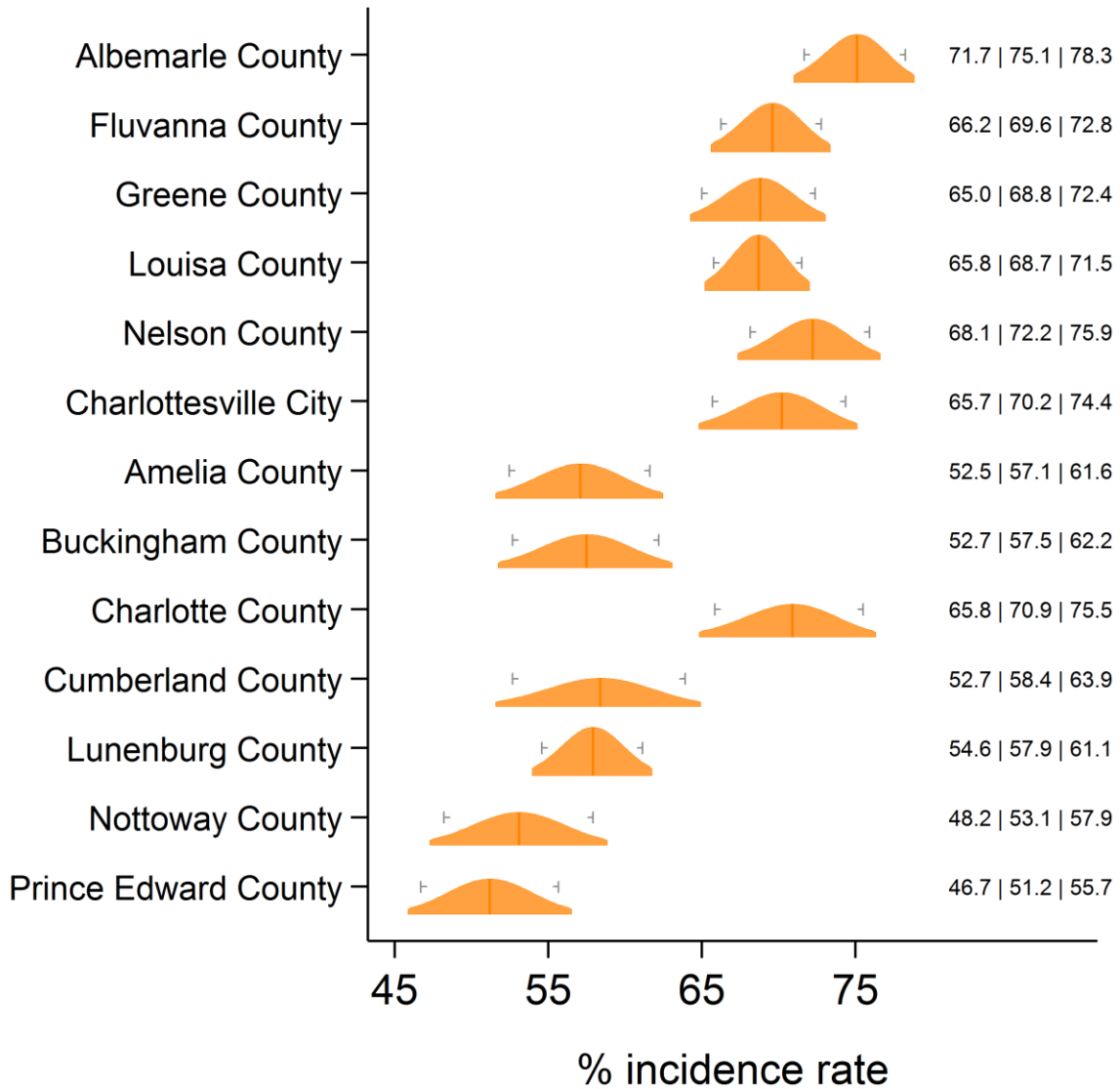
Dental visit past 12 months Rappahannock/Rapidan and Rappahannock HDs



Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval



Dental visit past 12 months Thomas Jefferson and Piedmont HDs

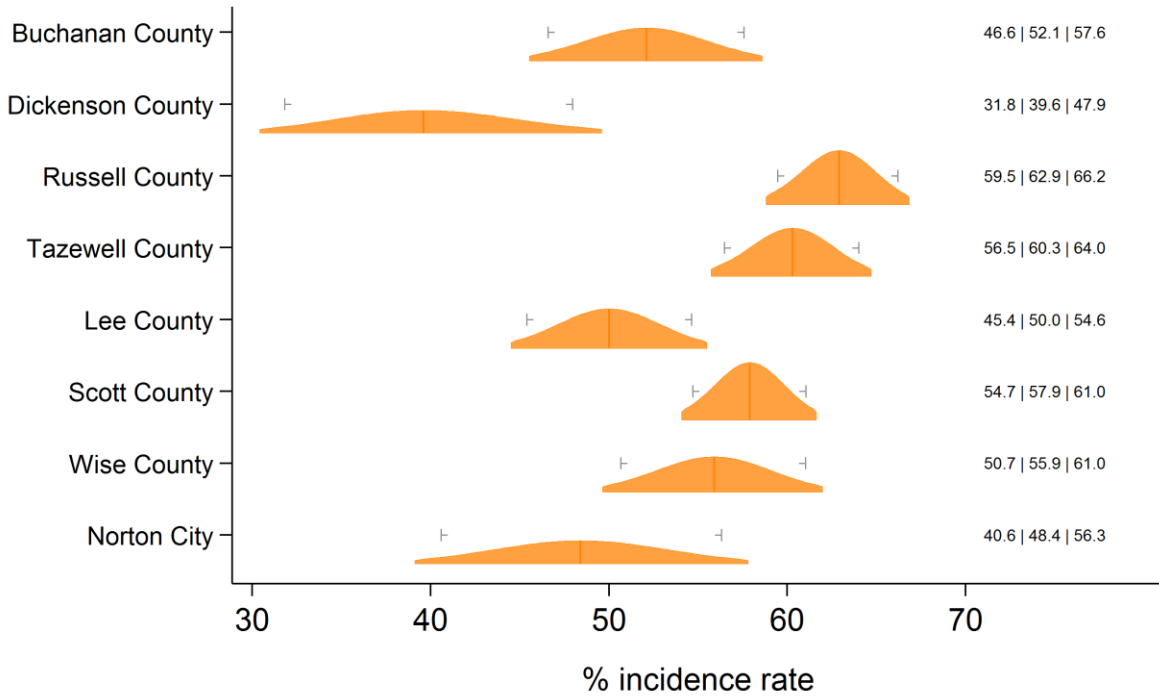


Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval

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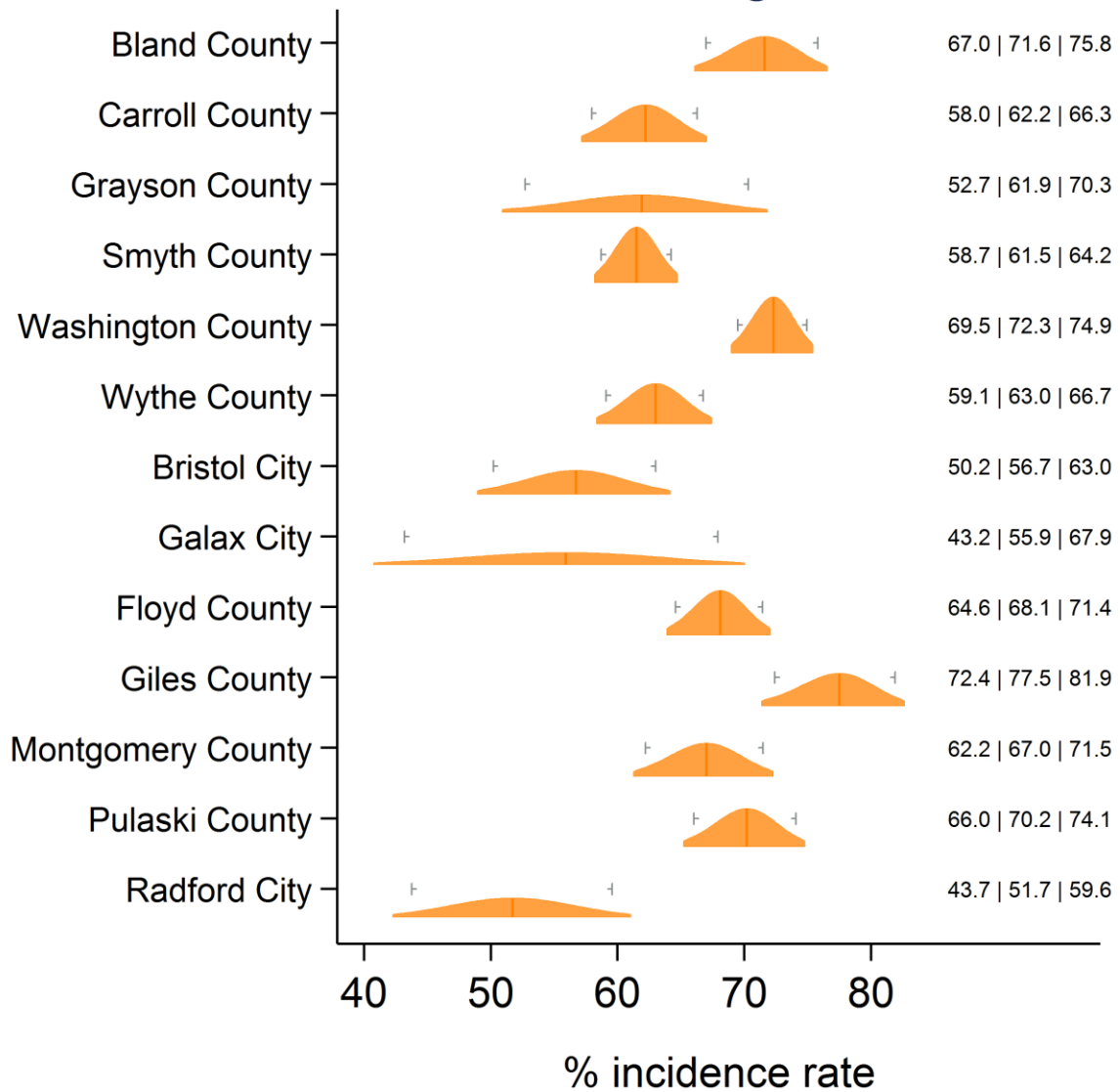
Dental visit past 12 months Cumberland Plateau and Lenowisco HDs



Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval



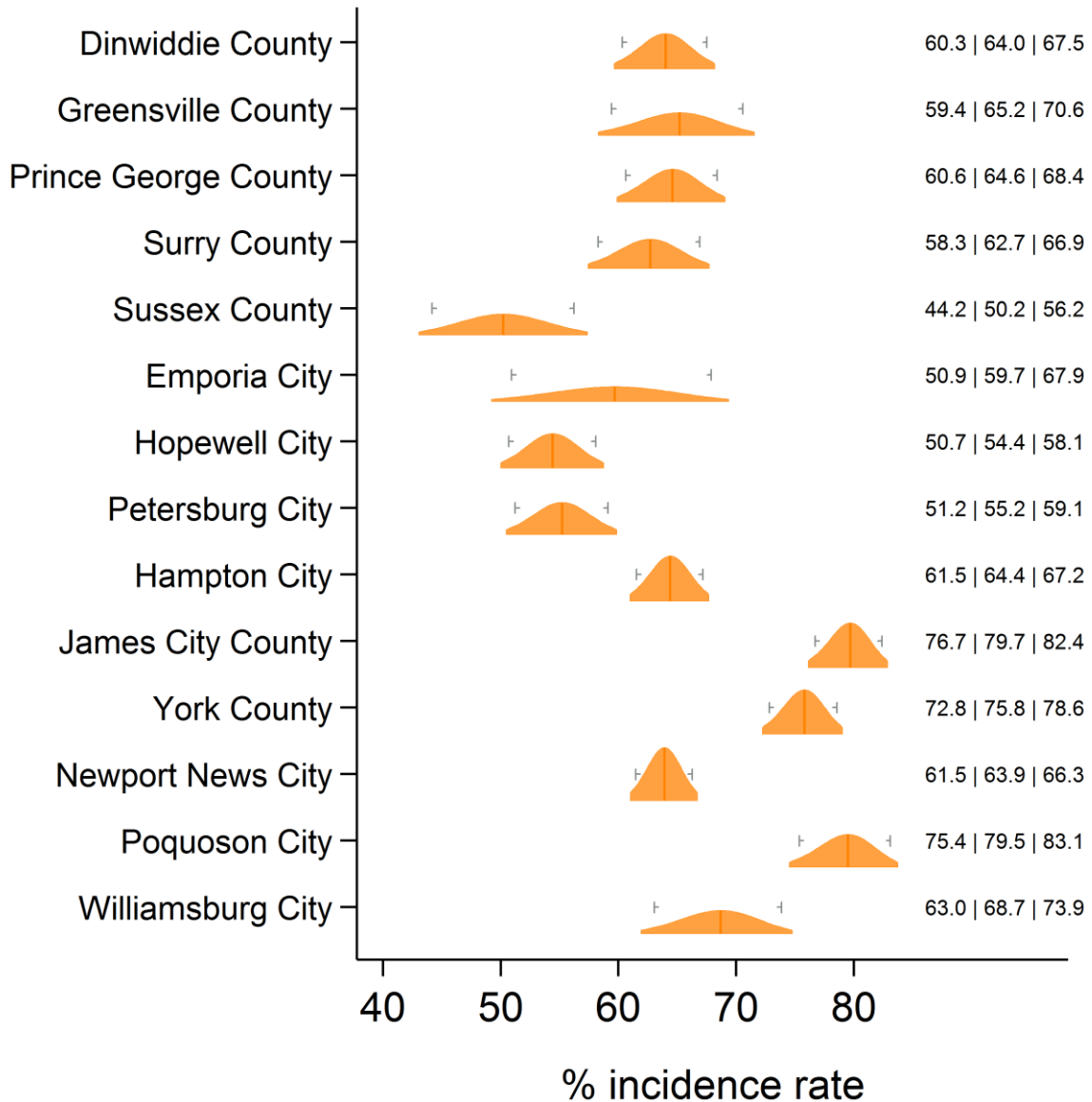
Dental visit past 12 months New River and Mount Rogers HDs



Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval



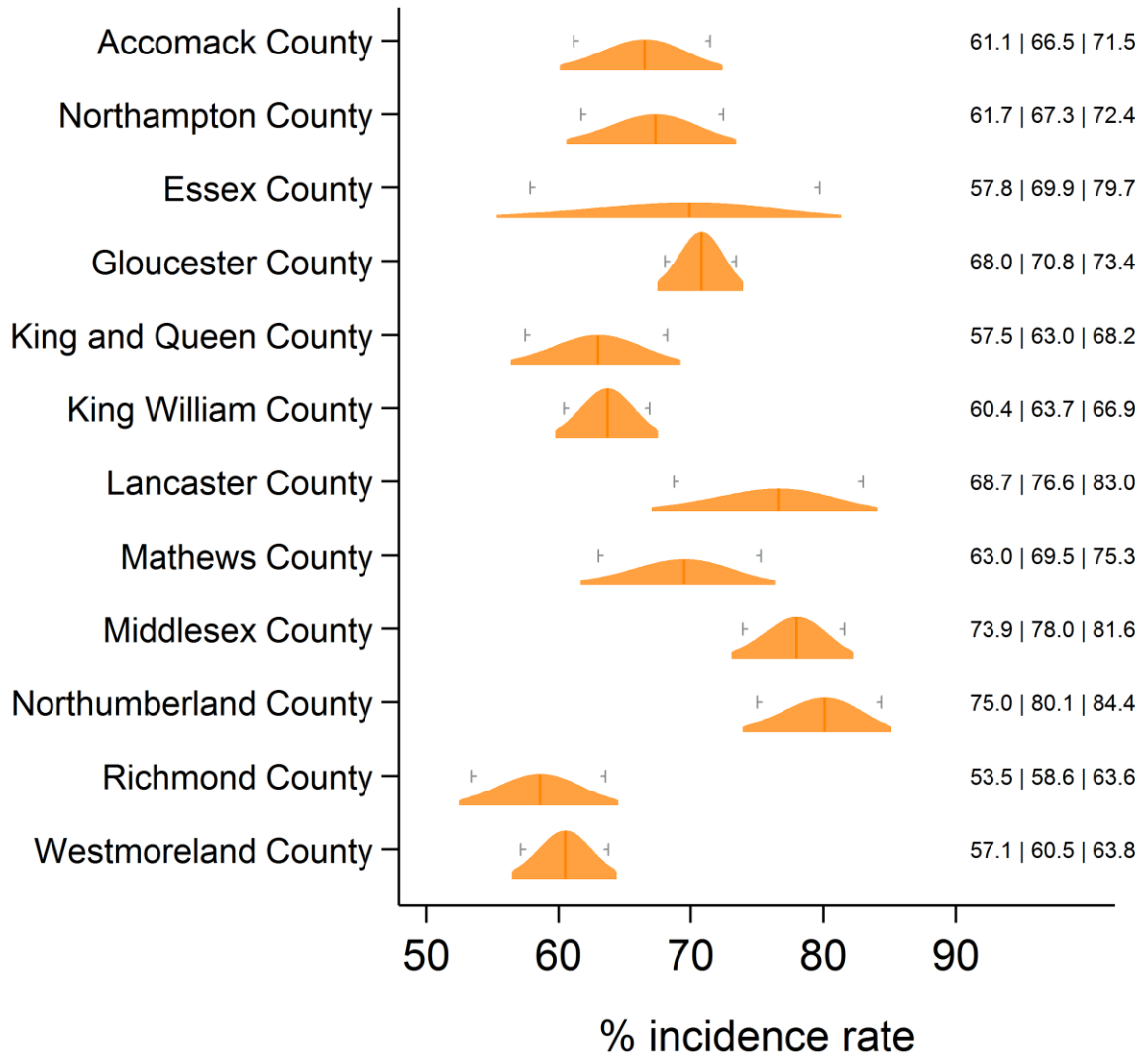
Dental visit past 12 months Crater, Peninsula and Hampton HDs



Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB
Gray markers: 90% confidence interval



Dental visit past 12 months Eastern Shore and Three Rivers HDs





Section 5: Additional diagnostics

Direct estimate is inside the 95% SAE Wilson CI: 51 areas.

Direct estimate is outside the 95% SAE Wilson CI: 82 areas.

SAE estimate is inside the 95% direct Wilson CI: 131 areas.

SAE estimate is outside the 95% direct Wilson CI: 2 areas.

SAE Wilson 95% CI is fully inside the 95% direct Wilson CI: 121 areas.

SAE Wilson 95% CI partially overlaps with the 95% direct Wilson CI: 12 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: 127 areas.

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

Direct standard error is zero: 5 areas.

Proportion of SAE variance due to ACS sampling error: min = 0.41%; med = 19.37%; max = 51.50%.

Proportion of SAE variance to sampling error in regression coefficient estimates: min = 47.99%; med = 79.32%; max = 98.40%.

Proportion of SAE variance due to model selection: min = 0.05%; med = 1.33%; max = 13.01%.