

Indicator 22: Has dental insurance

Internal variable name: outc22_dentins

Definition: Do you have any kind of insurance coverage that pays for some or all of your routine dental care, including dental insurance prepaid plans?

Predictive models

	Mixed, demos only	Logit, no area effects	Mixed with area covariates
	b/se	b/se	b/se
Outcome 22: Has dental insurance			
NH Black vs. NH White	-0.2523** (0.0882)	-0.2749** (0.0998)	-0.2749** (0.0861)
NH Asian vs. NH White	0.0941 (0.2729)	-0.0409 (0.2569)	-0.0409 (0.2609)
NH Other vs. NH White	0.0015 (0.1704)	-0.0611 (0.1765)	-0.0611 (0.1676)
Hispanic vs. NH White	-1.0737*** (0.2431)	-1.1656*** (0.1693)	-1.1656*** (0.2458)
Female	-0.0625 (0.0768)	-0.0632 (0.0739)	-0.0632 (0.0767)
Age 18-34 vs. 65+	1.0360*** (0.1357)	1.0208*** (0.1073)	1.0208*** (0.1332)
Age 35-44 vs. 65+	1.2298*** (0.1427)	1.2134*** (0.1200)	1.2134*** (0.1413)
Age 45-54 vs. 65+	1.2351*** (0.1431)	1.2400*** (0.1028)	1.2400*** (0.1404)
Age 55-64 vs. 65+	0.8947*** (0.0950)	0.8942*** (0.0863)	0.8942*** (0.0945)
% NH minority among adults 18 to 64		0.0171*** (0.0033)	0.0171*** (0.0029)
% uninsured, County Rankings/SAHIE		-0.0351 (0.0250)	-0.0351 (0.0258)
% HHs receiving SNAP		-0.0522*** (0.0113)	-0.0522*** (0.0109)
% inst group quarter pop, 2010 Census		-0.0038 (0.0309)	-0.0038 (0.0313)
o.% inst group quarter pop, 2010 Census		0.0000 (.)	
VA BRFSS 2014 SAE outc20_heavy_drink		-3.5198 (2.0340)	-3.5198 (2.1306)
c.PDB_pct_inst_gq_cen10#c.VA14SAE_outc20_heavy_drink		-0.4020 (0.4908)	-0.4020 (0.4708)
Colorectal All Rate		-0.0791	-0.0791

		(0.0495)	(0.0464)
Historic SAE: current smoking rate		-0.0012	-0.0012
		(0.0299)	(0.0301)
c.ColorectalAllRate#c.papsmear		0.0010	0.0010
		(0.0006)	(0.0006)
Intercept	-0.0704	0.5836	0.5835
	(0.0914)	(2.6046)	(2.6293)
Area effect variance			
	0.2512***		0.0000
	(0.0467)		(0.0000)

Number of alternative models used to estimate model error = 7.

Results

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Augusta County	51015	47.9%	(36.0%, 60.0%)	56.5%	(52.2%, 60.7%)
Bath County	51017	51.5%	(17.9%, 83.8%)	51.8%	(47.0%, 56.6%)
Caroline County	51033	45.8%	(20.3%, 73.7%)	62.8%	(60.0%, 65.5%)
Clarke County	51043	76.9%	(44.5%, 93.3%)	64.2%	(59.3%, 68.7%)
Culpeper County	51047	62.0%	(43.6%, 77.5%)	53.6%	(48.7%, 58.4%)
Fauquier County	51061	70.4%	(52.7%, 83.5%)	68.3%	(64.6%, 71.8%)
Frederick County	51069	59.8%	(44.4%, 73.5%)	64.0%	(60.2%, 67.6%)
Highland County	51091	26.8%	(3.0%, 81.2%)	42.5%	(24.9%, 62.3%)
King George County	51099	82.9%	(55.6%, 95.0%)	62.0%	(48.0%, 74.2%)
Madison County	51113	69.2%	(40.2%, 88.3%)	51.2%	(46.7%, 55.7%)
Orange County	51137	37.6%	(21.3%, 57.3%)	53.8%	(46.8%, 60.6%)
Page County	51139	35.2%	(16.6%, 59.7%)	46.4%	(42.0%, 50.8%)
Rappahannock County	51157	43.9%	(18.8%, 72.6%)	57.9%	(51.5%, 64.1%)
Rockbridge County	51163	66.2%	(45.9%, 81.8%)	49.8%	(45.5%, 54.2%)
Rockingham County	51165	66.0%	(53.4%, 76.6%)	58.2%	(53.5%, 62.7%)
Shenandoah County	51171	41.1%	(25.0%, 59.4%)	48.1%	(43.3%, 52.9%)
Spotsylvania County	51177	71.2%	(56.7%, 82.4%)	69.6%	(66.0%, 73.0%)
Stafford County	51179	84.2%	(73.7%, 91.0%)	74.7%	(71.0%, 78.1%)
Warren County	51187	44.8%	(27.5%, 63.5%)	56.7%	(52.9%, 60.4%)
Buena Vista City	51530	71.9%	(24.0%, 93.7%)	44.6%	(37.3%, 52.1%)
Fredericksburg City	51630	73.4%	(50.7%, 88.1%)	57.2%	(51.9%, 62.4%)
Harrisonburg City	51660	26.8%	(5.5%, 69.7%)	55.5%	(49.4%, 61.3%)
Lexington City	51678	20.1%	(0.5%, 97.3%)	82.5%	(68.1%, 91.3%)
Staunton City	51790	30.9%	(9.6%, 68.9%)	56.2%	(52.7%, 59.7%)
Waynesboro City	51820	42.0%	(12.9%, 78.0%)	44.1%	(37.1%, 51.3%)
Winchester City	51840	37.4%	(6.9%, 82.7%)	55.8%	(49.9%, 61.5%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Albemarle County	51003	71.2%	(59.7%, 80.4%)	65.7%	(62.1%, 69.1%)
Alleghany County	51005	40.8%	(17.7%, 68.9%)	50.5%	(41.2%, 59.7%)
Amherst County	51009	83.7%	(65.1%, 93.3%)	62.2%	(58.9%, 65.5%)
Appomattox County	51011	73.8%	(45.9%, 90.4%)	56.3%	(51.1%, 61.2%)
Arlington City	51013	80.6%	(72.0%, 87.0%)	72.6%	(68.1%, 76.8%)
Bedford County	51019	66.2%	(54.4%, 76.3%)	62.7%	(59.1%, 66.2%)
Botetourt County	51023	60.1%	(38.1%, 78.7%)	69.4%	(64.2%, 74.1%)
Campbell County	51031	61.4%	(47.7%, 73.6%)	60.8%	(57.0%, 64.5%)
Craig County	51045	57.0%	(12.7%, 92.4%)	39.8%	(32.6%, 47.5%)
Fairfax County	51059	76.9%	(71.9%, 81.3%)	74.9%	(72.6%, 77.2%)
Fluvanna County	51065	69.3%	(49.7%, 83.8%)	64.2%	(58.6%, 69.5%)
Greene County	51079	72.8%	(41.2%, 91.1%)	63.2%	(57.1%, 68.9%)
Loudoun County	51107	75.6%	(65.8%, 83.2%)	78.6%	(75.4%, 81.5%)
Louisa County	51109	58.5%	(38.9%, 75.7%)	57.3%	(53.9%, 60.7%)
Nelson County	51125	92.2%	(61.3%, 96.5%)	52.7%	(48.5%, 56.9%)
Prince William County	51153	74.0%	(67.4%, 79.7%)	70.9%	(67.9%, 73.8%)
Roanoke County	51161	66.2%	(54.7%, 76.0%)	65.3%	(61.6%, 68.8%)
Alexandria City	51510	57.5%	(44.8%, 69.4%)	66.4%	(59.8%, 72.4%)
Charlottesville City	51540	91.9%	(72.1%, 95.9%)	73.2%	(62.9%, 81.5%)
Covington City	51580	19.5%	(0.4%, 97.4%)	49.5%	(36.5%, 62.6%)
Fairfax City	51600	85.4%	(74.0%, 92.4%)	69.4%	(64.0%, 74.4%)
Falls Church City	51610	74.3%	(47.1%, 90.4%)	70.7%	(64.5%, 76.3%)
Lynchburg City	51680	56.8%	(42.3%, 70.2%)	60.4%	(56.9%, 63.8%)
Manassas City	51683	71.6%	(40.7%, 90.3%)	69.2%	(60.8%, 76.5%)
Manassas Park City	51685	84.2%	(18.5%, 97.6%)	59.5%	(38.7%, 77.3%)
Salem City	51775	81.1%	(35.8%, 97.1%)	58.7%	(54.9%, 62.3%)

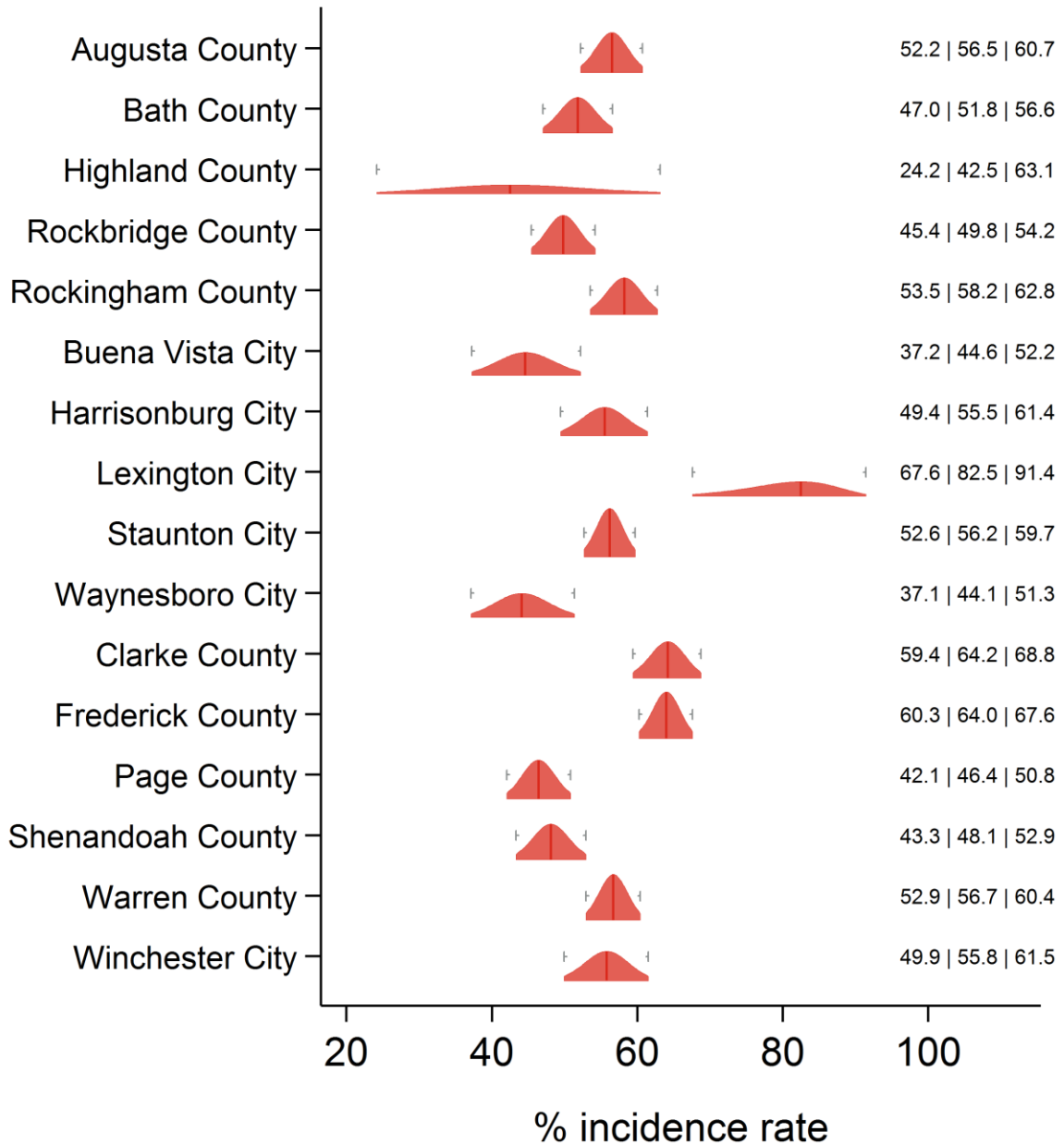
County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Bland County	51021	34.0%	(13.0%, 64.0%)	41.2%	(34.2%, 48.6%)
Buchanan County	51027	38.0%	(17.9%, 63.3%)	35.9%	(30.8%, 41.4%)
Carroll County	51035	52.4%	(31.6%, 72.5%)	42.9%	(37.7%, 48.2%)
Dickenson County	51051	35.5%	(15.6%, 62.0%)	34.4%	(28.4%, 40.9%)
Floyd County	51063	69.9%	(47.8%, 85.5%)	48.5%	(41.5%, 55.6%)
Franklin County	51067	49.1%	(28.7%, 69.8%)	52.6%	(49.0%, 56.1%)
Giles County	51071	60.0%	(39.3%, 77.7%)	55.9%	(48.6%, 62.9%)
Grayson County	51077	46.6%	(23.7%, 71.0%)	40.8%	(33.6%, 48.4%)
Henry County	51089	48.4%	(31.6%, 65.5%)	43.7%	(39.9%, 47.5%)
Lee County	51105	38.1%	(13.6%, 70.6%)	32.4%	(27.2%, 38.0%)
Montgomery County	51121	72.8%	(59.0%, 83.2%)	67.6%	(63.7%, 71.2%)
Patrick County	51141	54.1%	(24.8%, 80.9%)	41.6%	(37.7%, 45.7%)
Pittsylvania County	51143	50.4%	(38.7%, 62.0%)	55.4%	(51.8%, 58.9%)
Pulaski County	51155	58.9%	(37.4%, 77.4%)	56.2%	(51.1%, 61.1%)
Russell County	51167	62.9%	(43.7%, 78.8%)	40.9%	(36.5%, 45.5%)
Scott County	51169	61.5%	(41.2%, 78.4%)	45.6%	(40.5%, 50.9%)
Smyth County	51173	40.7%	(12.9%, 76.0%)	40.9%	(36.0%, 46.0%)
Tazewell County	51185	64.4%	(46.6%, 78.9%)	42.9%	(38.2%, 47.8%)
Washington County	51191	45.4%	(30.8%, 60.8%)	52.8%	(48.3%, 57.3%)
Wise County	51195	53.4%	(37.4%, 68.7%)	44.9%	(38.8%, 51.2%)
Wythe County	51197	40.4%	(22.6%, 61.1%)	44.1%	(39.0%, 49.3%)
Bristol City	51520	33.0%	(2.4%, 90.8%)	39.2%	(33.0%, 45.9%)
Danville City	51590	41.2%	(19.5%, 66.8%)	50.1%	(43.3%, 56.9%)
Galax City	51640	2.9%	(0.6%, 76.9%)	19.3%	(9.5%, 35.3%)
Martinsville City	51690	60.6%	(21.0%, 89.9%)	46.0%	(37.2%, 55.0%)
Norton City	51720	35.5%	(4.4%, 86.8%)	20.5%	(11.9%, 32.9%)
Radford City	51750	60.1%	(25.5%, 86.9%)	59.3%	(54.2%, 64.2%)
Roanoke City	51770	62.3%	(49.0%, 74.0%)	56.1%	(51.2%, 60.9%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Amelia County	51007	77.5%	(52.6%, 91.5%)	62.3%	(55.9%, 68.3%)
Brunswick County	51025	30.2%	(11.9%, 58.1%)	41.4%	(32.2%, 51.4%)
Buckingham County	51029	34.9%	(18.3%, 56.2%)	45.1%	(39.0%, 51.4%)
Charles City County	51036	61.2%	(17.1%, 92.3%)	70.7%	(62.6%, 77.6%)
Charlotte County	51037	51.1%	(29.7%, 72.0%)	39.1%	(28.6%, 50.7%)
Chesterfield County	51041	76.4%	(69.0%, 82.6%)	72.8%	(70.1%, 75.3%)
Cumberland County	51049	52.5%	(29.5%, 74.5%)	52.9%	(46.8%, 58.9%)
Dinwiddie County	51053	75.1%	(51.2%, 89.6%)	63.3%	(58.2%, 68.1%)
Goochland County	51075	74.7%	(48.0%, 90.4%)	78.0%	(70.6%, 83.9%)
Greensville County	51081	31.4%	(10.6%, 63.8%)	46.2%	(29.2%, 64.1%)
Halifax County	51083	53.4%	(36.4%, 69.7%)	50.2%	(43.9%, 56.5%)
Hanover County	51085	84.8%	(76.4%, 90.6%)	74.3%	(67.7%, 80.0%)
Henrico County	51087	77.8%	(69.5%, 84.3%)	72.9%	(70.4%, 75.2%)
Lunenburg County	51111	44.8%	(18.3%, 74.6%)	43.0%	(36.6%, 49.6%)
Mecklenburg County	51117	59.2%	(44.2%, 72.6%)	54.3%	(49.5%, 59.0%)
New Kent County	51127	88.2%	(63.2%, 97.0%)	79.3%	(71.8%, 85.1%)
Nottoway County	51135	47.7%	(19.4%, 77.6%)	38.9%	(33.5%, 44.6%)
Powhatan County	51145	64.1%	(38.3%, 83.7%)	67.0%	(61.1%, 72.4%)
Prince Edward County	51147	64.0%	(43.3%, 80.5%)	55.9%	(50.0%, 61.7%)
Prince George County	51149	68.0%	(48.6%, 82.7%)	54.2%	(41.7%, 66.1%)
Surry County	51181	50.7%	(20.7%, 80.3%)	58.6%	(51.8%, 65.2%)
Sussex County	51183	74.1%	(52.2%, 88.2%)	58.9%	(44.8%, 71.7%)
Colonial Heights City	51570	76.2%	(50.8%, 90.9%)	58.4%	(54.6%, 62.0%)
Emporia City	51595	100.0%	(8.2%, 100.0%)	39.9%	(30.7%, 49.9%)
Hopewell City	51670	52.5%	(27.1%, 76.6%)	48.7%	(43.5%, 54.0%)
Petersburg City	51730	53.1%	(33.6%, 71.7%)	55.9%	(46.0%, 65.3%)
Richmond City	51760	68.9%	(55.0%, 80.0%)	63.4%	(58.7%, 67.9%)

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE CI
Accomack County	51001	55.9%	(40.3%, 70.4%)	42.6%	(35.9%, 49.6%)
Essex County	51057	83.2%	(57.7%, 94.7%)	65.5%	(58.6%, 71.9%)
Gloucester County	51073	49.1%	(33.5%, 64.8%)	58.7%	(55.2%, 62.1%)
Isle of Wight County	51093	71.3%	(48.6%, 86.7%)	63.7%	(59.4%, 67.7%)
James City County	51095	75.5%	(63.8%, 84.3%)	67.5%	(64.3%, 70.5%)
King and Queen County	51097	39.5%	(14.0%, 72.3%)	58.7%	(54.2%, 63.1%)
King William County	51101	60.5%	(30.2%, 84.5%)	66.4%	(62.2%, 70.4%)
Lancaster County	51103	62.9%	(37.1%, 82.9%)	54.1%	(48.0%, 60.2%)
Mathews County	51115	74.6%	(42.2%, 92.2%)	51.2%	(44.8%, 57.6%)
Middlesex County	51119	50.9%	(27.9%, 73.5%)	43.6%	(34.1%, 53.6%)
Northampton County	51131	53.3%	(31.6%, 73.9%)	45.6%	(40.6%, 50.8%)
Northumberland County	51133	50.3%	(28.0%, 72.5%)	58.0%	(51.1%, 64.6%)
Richmond County	51159	45.4%	(21.2%, 72.0%)	42.0%	(33.4%, 51.1%)
Southampton County	51175	68.4%	(33.5%, 90.3%)	53.5%	(47.9%, 59.1%)
Westmoreland County	51193	66.4%	(44.5%, 82.9%)	52.7%	(47.7%, 57.5%)
York County	51199	72.8%	(56.6%, 84.6%)	67.5%	(62.5%, 72.1%)
Chesapeake City	51550	81.5%	(73.9%, 87.2%)	72.7%	(69.5%, 75.6%)
Franklin City	51620	62.2%	(33.8%, 84.1%)	62.0%	(55.0%, 68.5%)
Hampton City	51650	74.8%	(65.6%, 82.2%)	67.8%	(63.4%, 71.9%)
Newport News City	51700	65.3%	(53.2%, 75.7%)	63.1%	(59.3%, 66.8%)
Norfolk City	51710	55.9%	(46.1%, 65.3%)	64.0%	(60.2%, 67.6%)
Poquoson City	51735	87.7%	(22.3%, 97.6%)	71.2%	(66.9%, 75.1%)
Portsmouth City	51740	70.7%	(60.1%, 79.5%)	68.6%	(63.7%, 73.1%)
Suffolk City	51800	80.8%	(69.9%, 88.4%)	69.3%	(64.6%, 73.7%)
Virginia Beach City	51810	67.5%	(60.0%, 74.1%)	70.1%	(67.6%, 72.5%)
Williamsburg City	51830	68.5%	(18.3%, 95.5%)	78.9%	(64.4%, 88.5%)

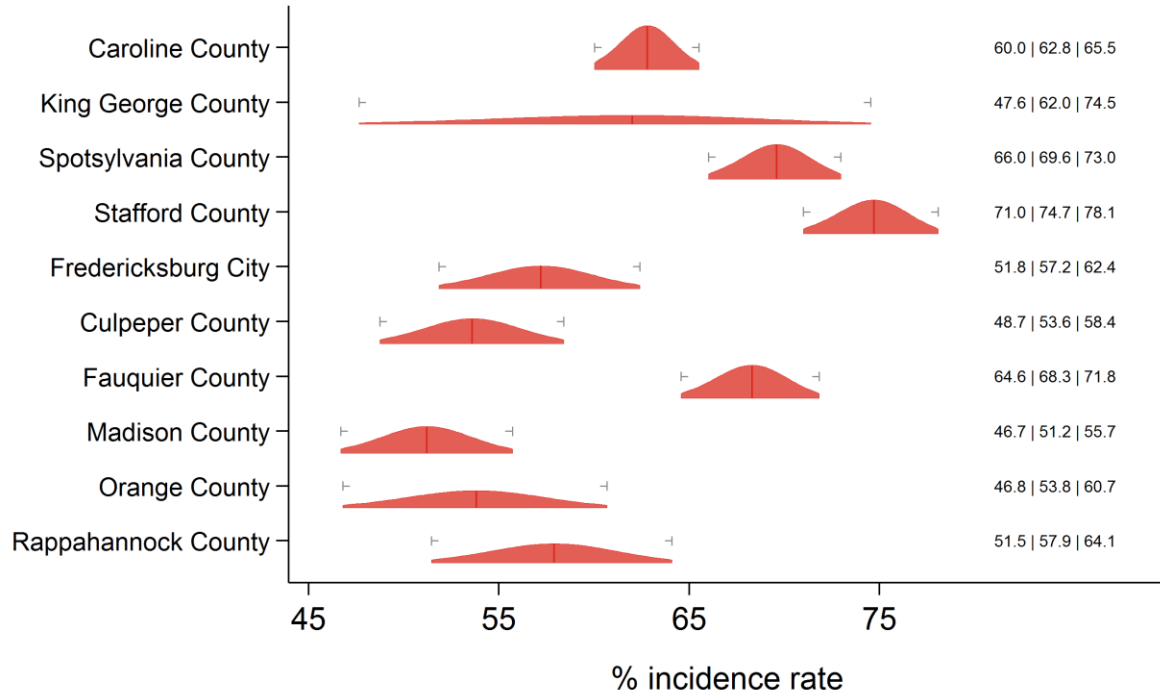
Graphical representation

Has dental insurance Central Shenandoah and Lord Fairfax HDs



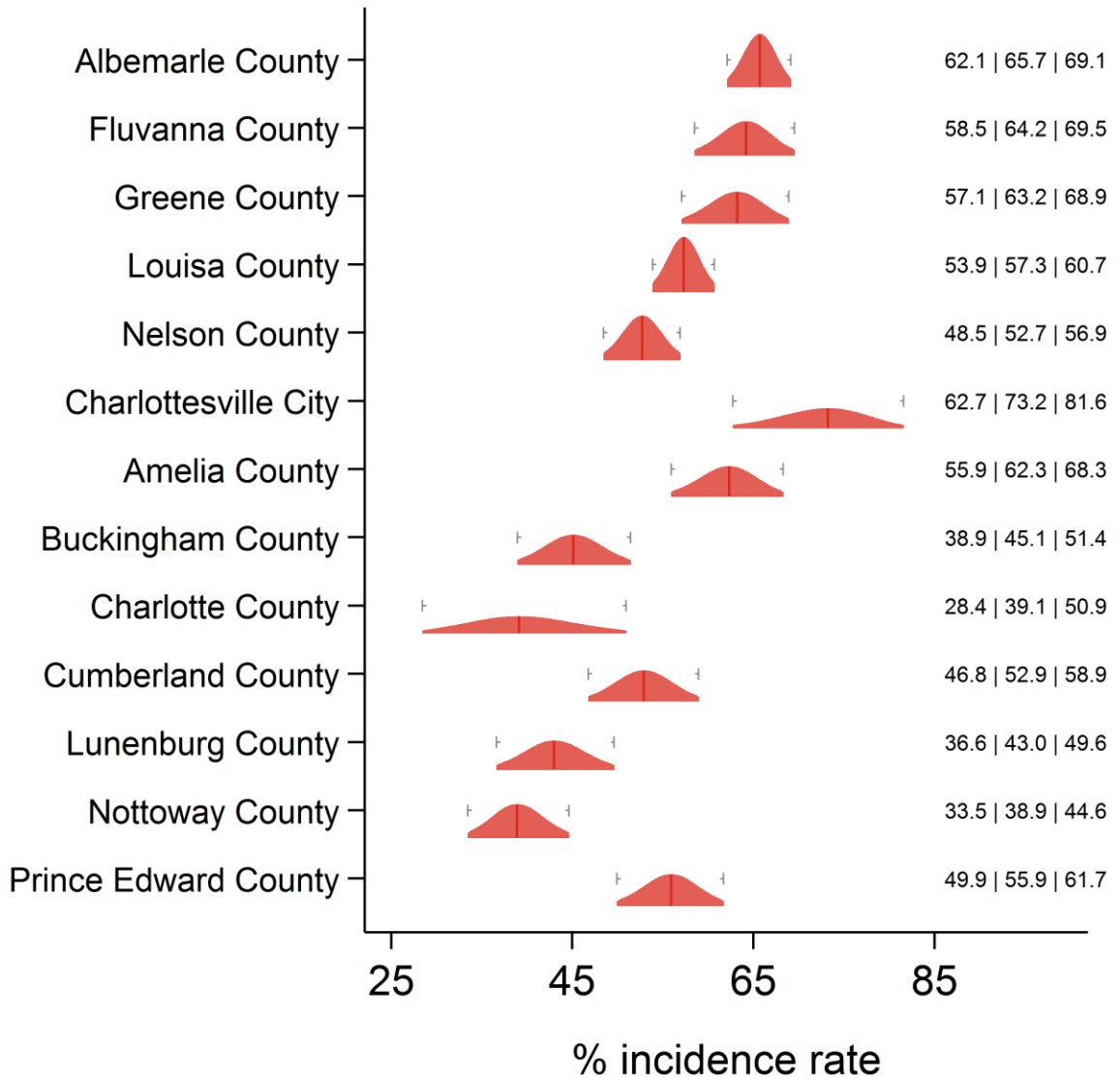
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 Gray markers: 95% confidence interval

Has dental insurance Rappahannock/Rapidan and Rappahannock HDs



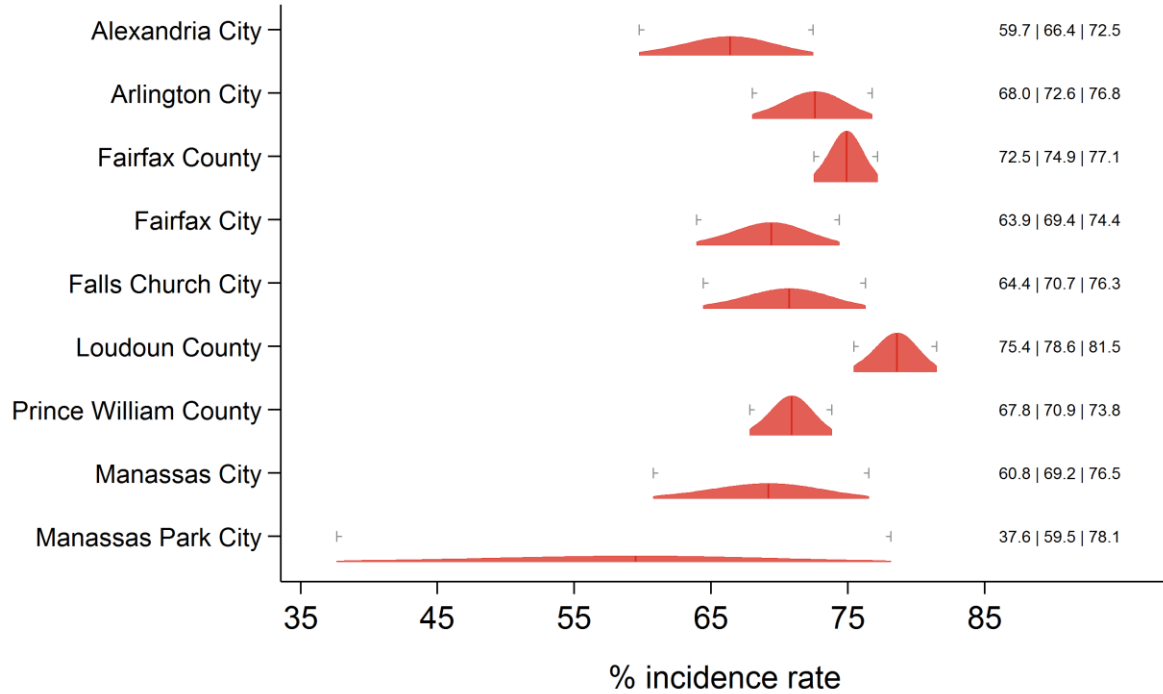
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Has dental insurance Thomas Jefferson and Piedmont HDs



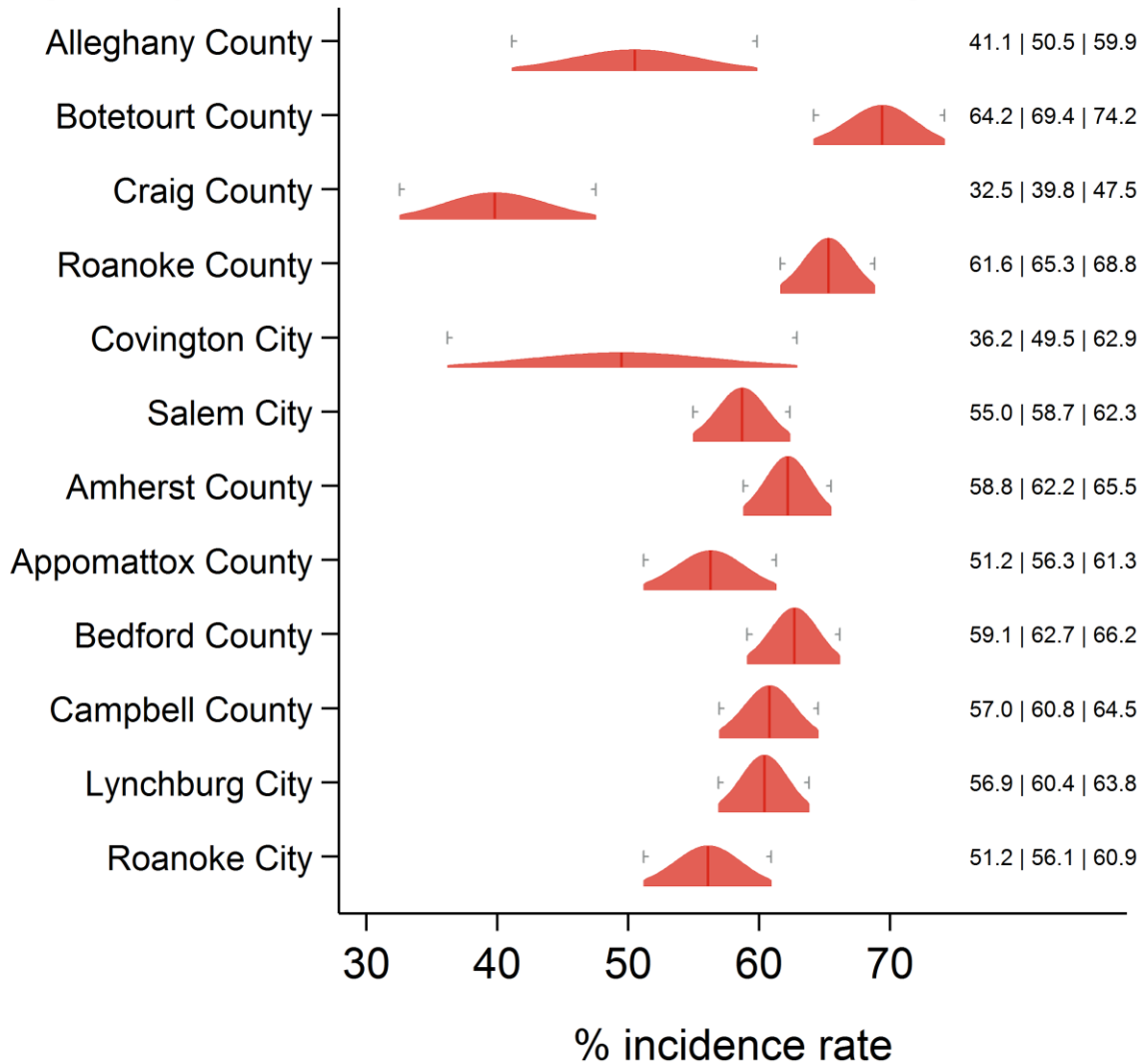
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Has dental insurance Alexandria, Fairfax, Arlington, Loudon, Prince William HDs



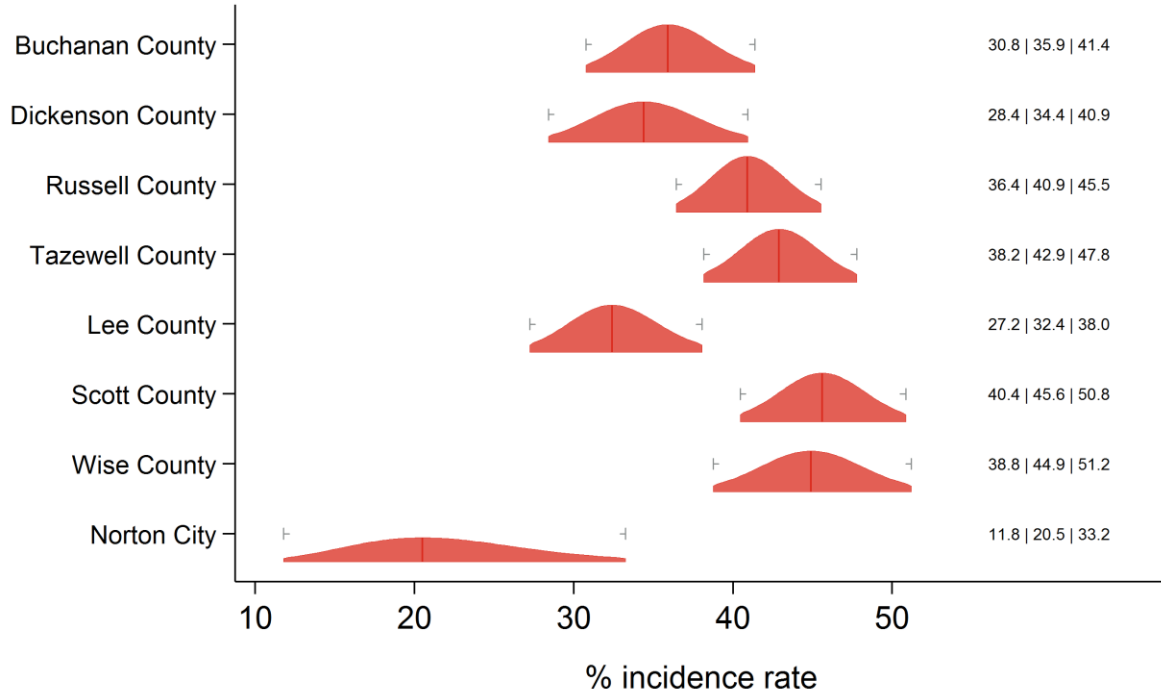
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Has dental insurance Alleghany, Roanoke and Central Virginia HDs



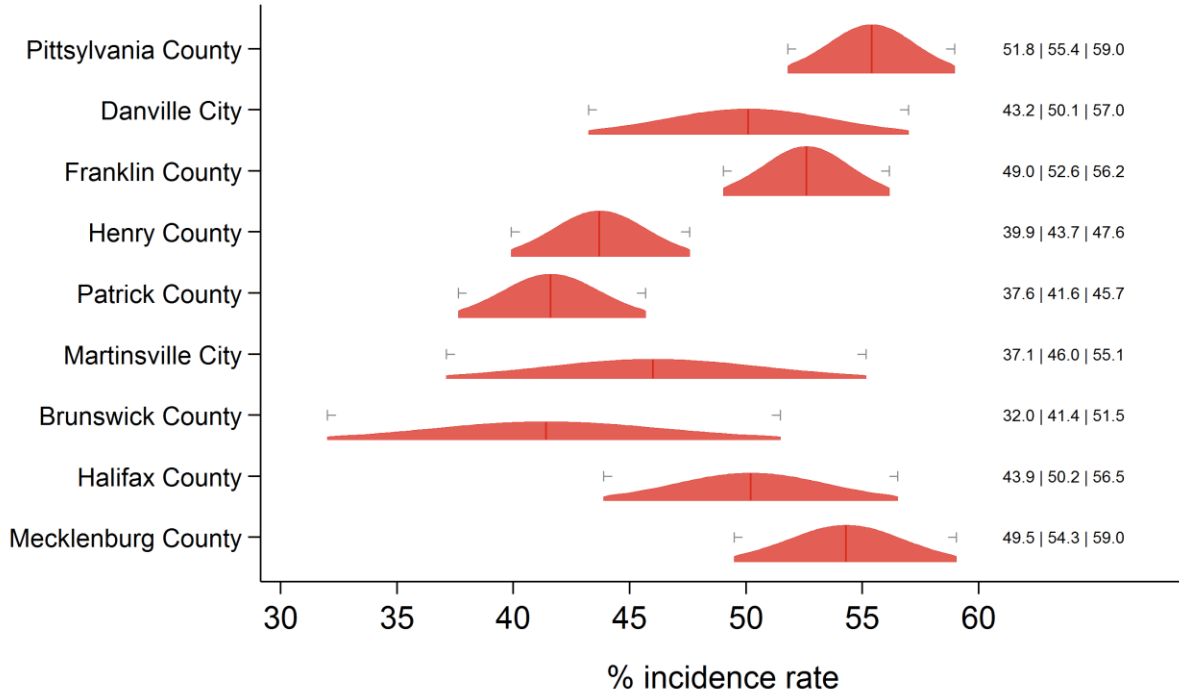
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Has dental insurance Cumberland Plateau and Lenowisco HDs



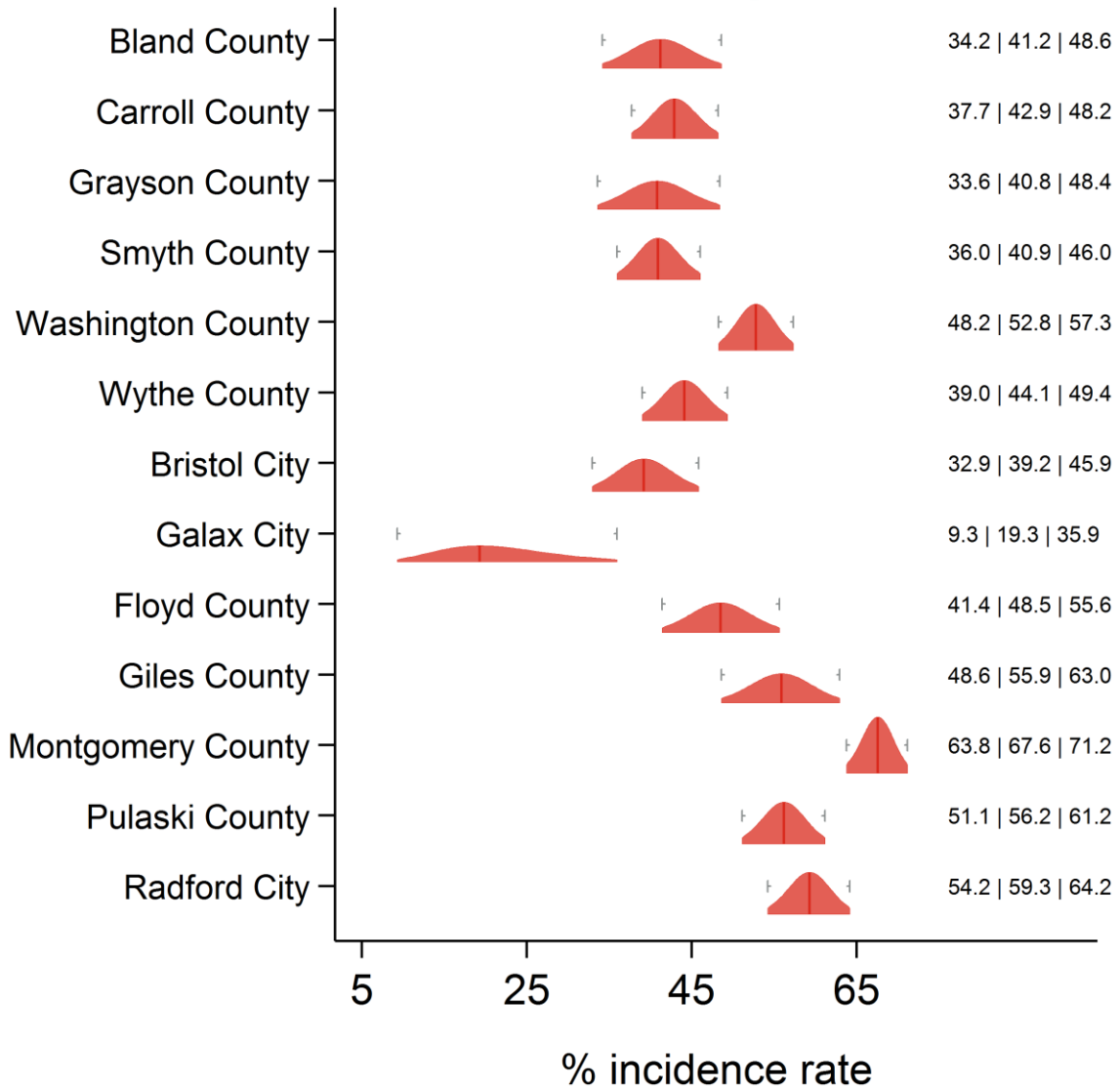
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Has dental insurance Pittsylvania/Danville, Southside and West Piedmont HDs



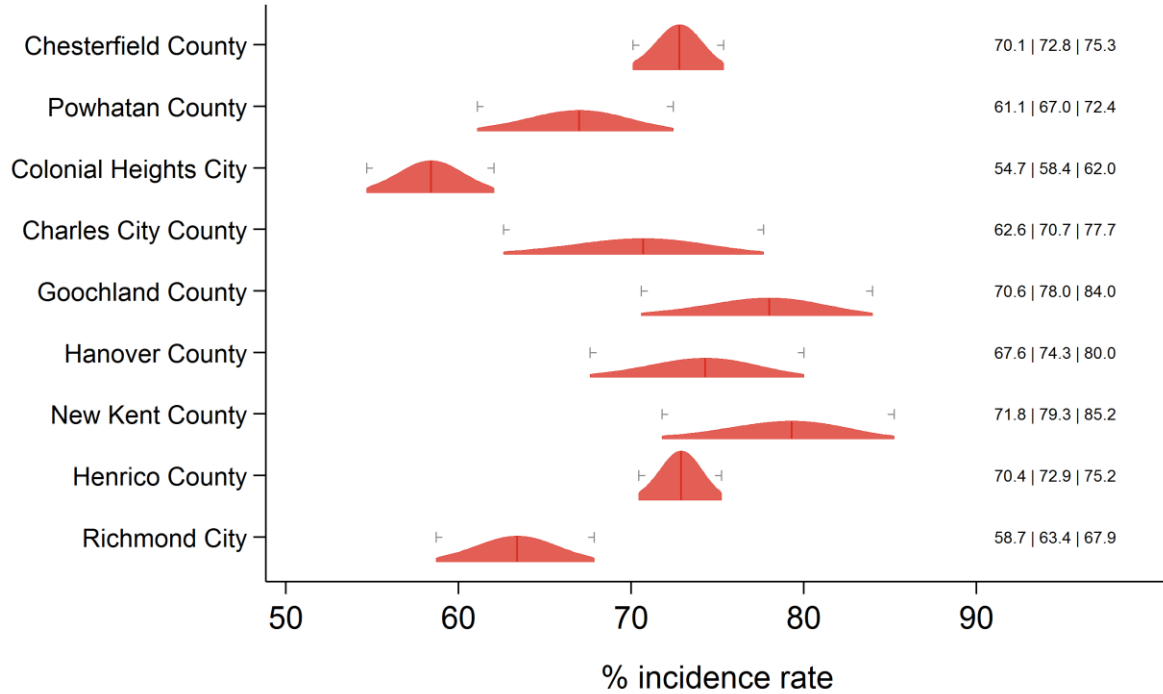
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Has dental insurance New River and Mount Rogers HDs



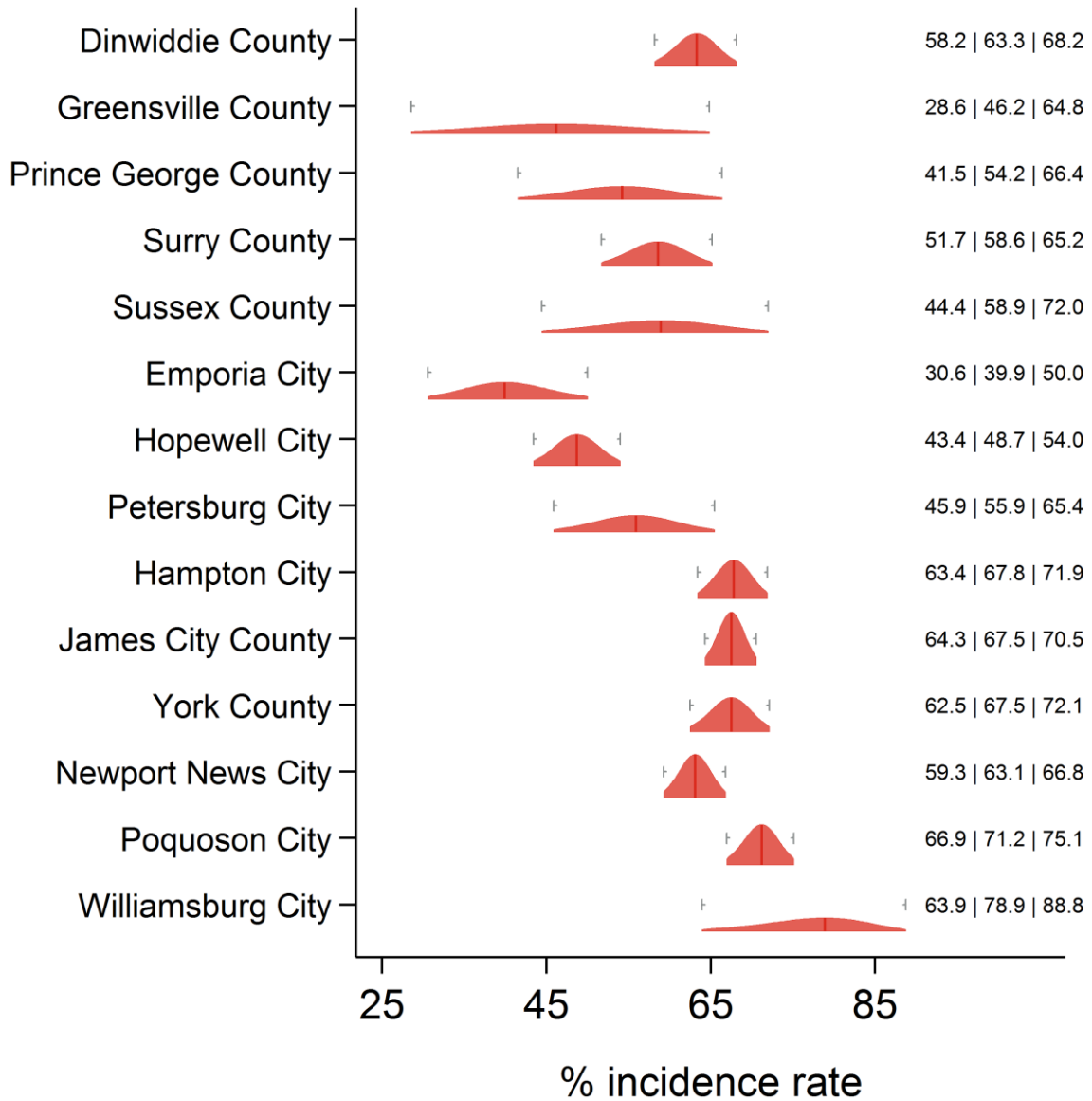
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Has dental insurance Chesterfield, Chickahominy, Henrico and Richmond HDs



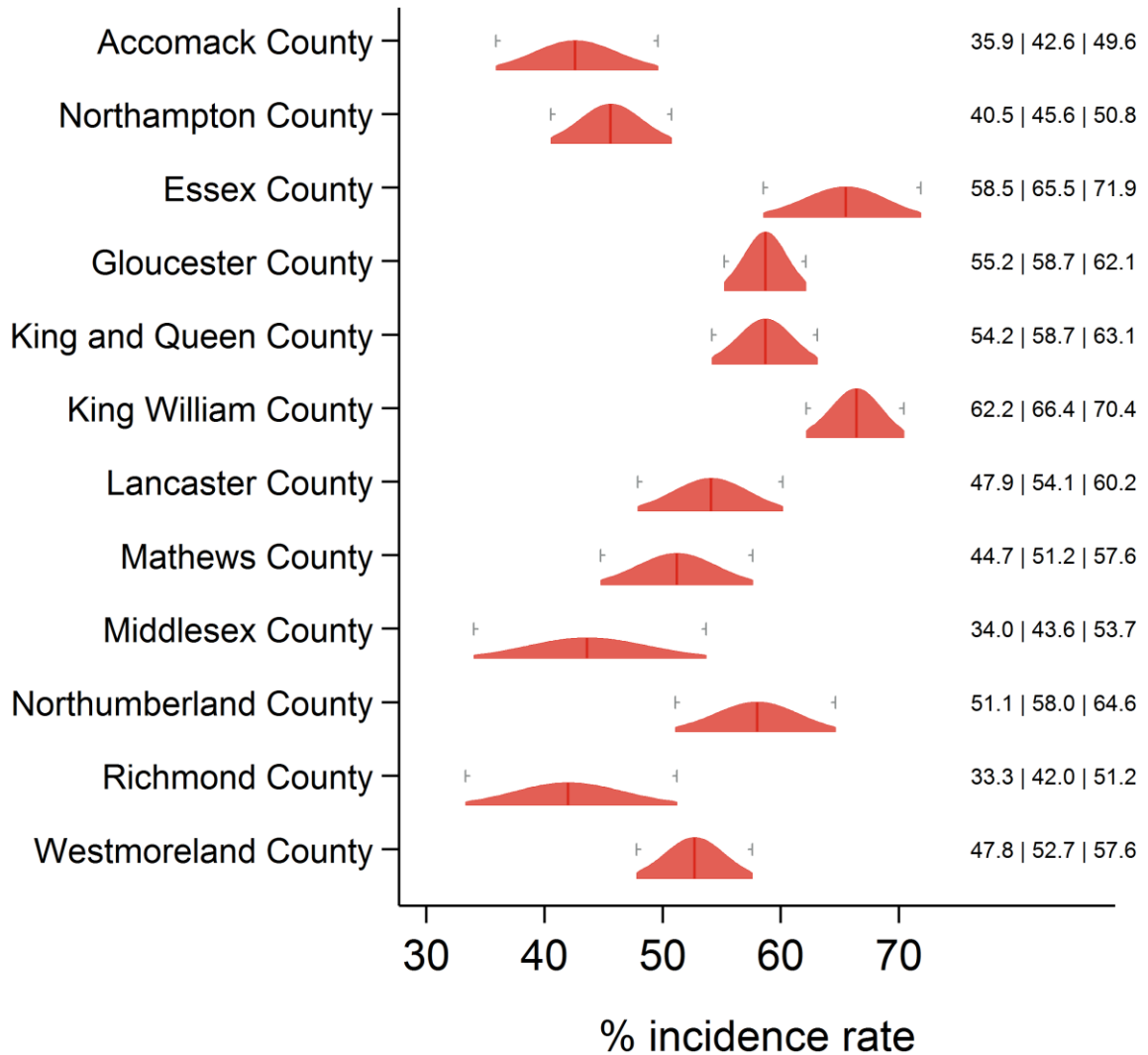
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Has dental insurance Crater, Peninsula and Hampton HDs



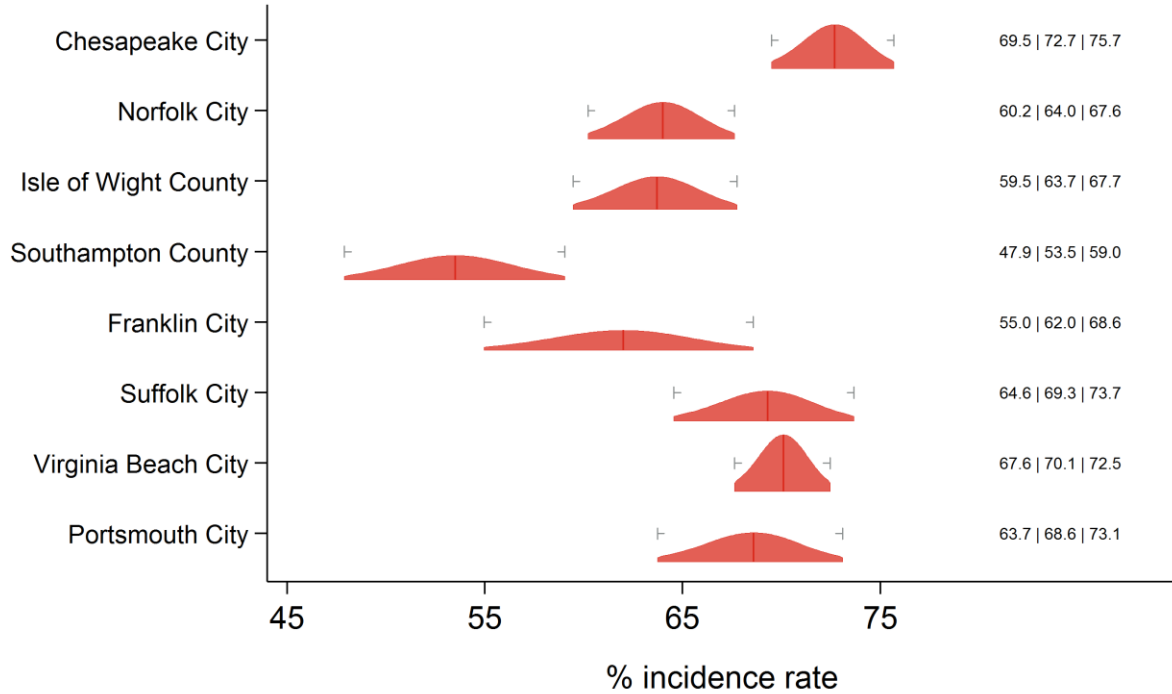
Text at right: 2-sided 95% LCB | Point Estimate | 2-sided 95% UCB
 Gray markers: 95% confidence interval

Has dental insurance Eastern Shore and Three Rivers HDs



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

Has dental insurance 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: 36 areas.

Direct estimate is outside the 95% SAE Wilson CI: 97 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: 108 areas.

SAE Wilson 95% CI partially overlaps with the 95% direct Wilson CI: 25 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: 130 areas.

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

Direct standard error is zero: 1 areas.

Proportion of SAE variance due to ACS sampling error: min = 0.24%; med = 12.46%; max = 54.36%.

Proportion of SAE variance due to sampling error in regression coefficient estimates: min = 44.78%; med = 85.23%; max = 98.43%.

Proportion of SAE variance due to model selection: min = 0.05%; med = 1.27%; max = 13.80%.

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