



Indicator 21: Physical Activity in the Past Month

Internal variable name: outc21_phys_activity

Section 1: Definition

Definition: During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?

Section 2: Predictive models

	Mixed, demos only	Logit, no area effects	Mixed with area covariates
	b/se	b/se	b/se
Outcome 21: Physical Activity in the Past Month			
Non-Hispanic Black vs. Non-Hispanic White	-0.5046*** (0.0898)	-0.5292*** (0.0923)	-0.5292*** (0.0849)
Non-Hispanic Asian vs. Non-Hispanic White	-0.2112 (0.2168)	-0.3514 (0.2173)	-0.3514 (0.2220)
Non-Hispanic Other vs. Non-Hispanic White	0.2008 (0.1294)	0.1733 (0.1614)	0.1733 (0.1290)
Hispanic vs. Non-Hispanic White	-0.6111*** (0.1762)	-0.7126*** (0.1639)	-0.7126*** (0.1723)
Female	-0.2194*** (0.0621)	-0.2046** (0.0689)	-0.2046** (0.0622)
Age 18-24 vs. 65+	0.8254*** (0.1283)	0.8171*** (0.1524)	0.8171*** (0.1284)
Age 25-34 vs. 65+	0.8330*** (0.1039)	0.7967*** (0.1175)	0.7967*** (0.1048)
Age 35-44 vs. 65+	0.7684*** (0.0959)	0.7524*** (0.1090)	0.7524*** (0.0972)
Age 45-54 vs. 65+	0.5189*** (0.0953)	0.4898*** (0.0932)	0.4898*** (0.0943)
Age 55-64 vs. 65+	0.2855** (0.1075)	0.2829*** (0.0835)	0.2829** (0.1056)
Estimated infant mortality rate		-0.0398* (0.0163)	-0.0398** (0.0134)
% Hispanic among adults 18 to 64		0.0272** (0.0091)	0.0272*** (0.0059)
Historic SAE: mammogram screening		0.0227** (0.0085)	0.0227** (0.0070)
Asthma hospitalization rate per 1,000		0.0490 (0.1199)	0.0490 (0.1124)

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% education below High School, population 25+ years old		0.0109 (0.0164)	0.0109 (0.0123)
Crude mortality rate of septicemia per 10,000		0.1261 (0.1301)	0.1261 (0.1026)
{% education below High School, population 25+ years old}		-0.0110	-0.0110
interacted with {Crude mortality rate of septicemia per 10,000}		(0.0068)	(0.0058)
{Asthma hospitalization rate per 1,000 }		0.0152	0.0152
interacted with {Estimated infant mortality rate}		(0.0109)	(0.0100)
Intercept	0.9074*** (0.0735)	-0.8591 (0.7379)	-0.8591 (0.5135)
Area effect variance	0.0562* (0.0239)		0.0000 (0.0000)

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



Section 3: Results

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Augusta County	51015	67.5%	(57.9%, 75.9%)	73.4%	(69.9%, 76.6%)
Bath County	51017	83.0%	(48.7%, 94.2%)	77.5%	(74.1%, 80.5%)
Caroline County	51033	73.8%	(51.4%, 88.3%)	74.3%	(71.2%, 77.1%)
Clarke County	51043	79.9%	(55.1%, 92.8%)	80.2%	(76.7%, 83.4%)
Culpeper County	51047	74.6%	(59.1%, 85.7%)	74.8%	(71.4%, 77.9%)
Fauquier County	51061	70.0%	(57.0%, 80.4%)	78.4%	(74.4%, 81.8%)
Frederick County	51069	82.5%	(71.6%, 89.8%)	78.3%	(74.7%, 81.5%)
Highland County	51091	61.7%	(9.1%, 96.3%)	77.8%	(71.7%, 82.8%)
King George County	51099	82.8%	(47.2%, 96.3%)	78.8%	(74.6%, 82.5%)
Madison County	51113	75.2%	(51.1%, 89.8%)	72.8%	(69.0%, 76.4%)
Orange County	51137	78.7%	(61.1%, 89.7%)	76.1%	(72.7%, 79.2%)
Page County	51139	73.2%	(45.9%, 89.8%)	70.9%	(66.7%, 74.7%)
Rappahannock County	51157	75.2%	(49.5%, 90.3%)	78.3%	(75.0%, 81.3%)
Rockbridge County	51163	77.1%	(57.2%, 89.5%)	72.7%	(68.3%, 76.8%)
Rockingham County	51165	75.0%	(63.4%, 83.9%)	74.0%	(70.4%, 77.3%)
Shenandoah County	51171	74.4%	(61.1%, 84.4%)	73.8%	(70.4%, 77.0%)
Spotsylvania County	51177	81.9%	(71.7%, 89.0%)	79.4%	(76.3%, 82.2%)
Stafford County	51179	77.6%	(68.2%, 84.8%)	81.9%	(78.7%, 84.6%)
Warren County	51187	71.7%	(50.8%, 86.1%)	76.4%	(72.6%, 79.9%)
Buena Vista City	51530	87.8%	(8.7%, 99.1%)	69.1%	(61.3%, 76.0%)
Fredericksburg City	51630	81.0%	(60.4%, 92.3%)	80.4%	(75.4%, 84.5%)
Harrisonburg City	51660	84.6%	(53.1%, 96.4%)	79.2%	(75.3%, 82.6%)
Lexington City	51678	100.0%	(0.6%, 100.0%)	79.8%	(74.9%, 84.0%)
Staunton City	51790	73.5%	(31.4%, 94.4%)	72.3%	(69.5%, 75.0%)
Waynesboro City	51820	62.5%	(31.4%, 85.8%)	75.4%	(72.2%, 78.3%)
Winchester City	51840	69.1%	(39.2%, 88.5%)	81.4%	(76.8%, 85.3%)

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County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Albemarle County	51003	87.1%	(78.3%, 92.7%)	81.2%	(78.1%, 84.0%)
Alleghany County	51005	82.8%	(67.2%, 89.6%)	74.5%	(69.3%, 79.2%)
Amherst County	51009	63.0%	(41.2%, 80.5%)	68.8%	(64.6%, 72.7%)
Appomattox County	51011	69.8%	(45.7%, 86.4%)	72.4%	(69.3%, 75.4%)
Arlington City	51013	82.8%	(74.0%, 89.1%)	81.4%	(78.3%, 84.1%)
Bedford County	51019	70.6%	(58.3%, 80.6%)	76.4%	(73.2%, 79.2%)
Botetourt County	51023	79.1%	(65.5%, 88.2%)	79.5%	(75.7%, 82.8%)
Campbell County	51031	74.6%	(59.7%, 85.3%)	70.5%	(67.1%, 73.6%)
Craig County	51045	51.5%	(7.1%, 93.7%)	71.5%	(64.4%, 77.8%)
Fairfax County	51059	81.7%	(76.6%, 85.9%)	81.7%	(80.2%, 83.2%)
Fluvanna County	51065	78.9%	(55.6%, 91.8%)	76.9%	(72.5%, 80.8%)
Greene County	51079	54.9%	(30.3%, 77.3%)	65.1%	(58.9%, 70.9%)
Loudoun County	51107	82.1%	(74.4%, 87.8%)	81.3%	(78.7%, 83.7%)
Louisa County	51109	84.9%	(69.1%, 93.4%)	76.5%	(72.8%, 79.9%)
Nelson County	51125	63.1%	(40.8%, 80.9%)	71.9%	(67.6%, 75.8%)
Prince William County	51153	84.4%	(78.7%, 88.8%)	84.5%	(82.0%, 86.8%)
Roanoke County	51161	76.2%	(68.4%, 82.6%)	77.0%	(74.1%, 79.6%)
Alexandria City	51510	86.9%	(75.6%, 93.4%)	83.5%	(79.9%, 86.6%)
Charlottesville City	51540	87.5%	(63.6%, 96.6%)	79.8%	(76.4%, 82.8%)
Covington City	51580	100.0%	(0.6%, 100.0%)	77.6%	(71.9%, 82.4%)
Fairfax City	51600	80.4%	(68.5%, 88.5%)	81.4%	(78.5%, 84.0%)
Falls Church City	51610	57.9%	(11.2%, 93.8%)	75.4%	(69.6%, 80.3%)
Lynchburg City	51680	75.3%	(58.7%, 86.7%)	77.0%	(73.9%, 79.8%)
Manassas City	51683	90.2%	(57.5%, 97.5%)	85.5%	(79.7%, 89.9%)
Manassas Park City	51685	100.0%	(3.2%, 100.0%)	90.0%	(83.2%, 94.3%)
Salem City	51775	48.1%	(14.7%, 83.3%)	78.7%	(74.8%, 82.2%)

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County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Bland County	51021	84.3%	(48.4%, 96.9%)	75.5%	(71.1%, 79.5%)
Buchanan County	51027	64.1%	(48.7%, 77.1%)	64.0%	(57.3%, 70.1%)
Carroll County	51035	65.0%	(48.2%, 78.8%)	68.5%	(64.9%, 71.9%)
Dickenson County	51051	67.4%	(48.0%, 82.3%)	64.0%	(57.7%, 69.8%)
Floyd County	51063	60.3%	(38.5%, 78.6%)	72.5%	(67.5%, 76.9%)
Franklin County	51067	84.4%	(71.5%, 92.1%)	74.6%	(71.4%, 77.5%)
Giles County	51071	60.5%	(36.6%, 80.3%)	71.6%	(67.5%, 75.4%)
Grayson County	51077	46.9%	(25.4%, 69.6%)	56.7%	(49.5%, 63.5%)
Henry County	51089	64.1%	(51.9%, 74.8%)	66.3%	(63.1%, 69.2%)
Lee County	51105	58.9%	(38.7%, 76.5%)	66.5%	(61.3%, 71.2%)
Montgomery County	51121	77.8%	(66.3%, 86.2%)	77.9%	(74.8%, 80.8%)
Patrick County	51141	72.4%	(53.0%, 85.9%)	66.7%	(61.8%, 71.3%)
Pittsylvania County	51143	65.8%	(54.9%, 75.3%)	64.5%	(61.4%, 67.6%)
Pulaski County	51155	66.8%	(51.2%, 79.4%)	69.8%	(66.3%, 73.1%)
Russell County	51167	70.8%	(53.0%, 83.9%)	66.3%	(58.5%, 73.2%)
Scott County	51169	60.4%	(45.3%, 73.7%)	68.8%	(63.2%, 73.9%)
Smyth County	51173	70.8%	(53.7%, 83.5%)	69.1%	(65.8%, 72.2%)
Tazewell County	51185	76.5%	(64.3%, 85.4%)	67.0%	(61.7%, 71.9%)
Washington County	51191	69.4%	(55.9%, 80.2%)	72.5%	(69.6%, 75.2%)
Wise County	51195	58.5%	(45.1%, 70.8%)	61.3%	(54.8%, 67.5%)
Wythe County	51197	73.2%	(58.8%, 83.9%)	70.7%	(67.0%, 74.1%)
Bristol City	51520	60.3%	(25.3%, 87.2%)	69.6%	(65.1%, 73.8%)
Danville City	51590	61.3%	(37.5%, 80.7%)	68.7%	(61.5%, 75.1%)
Galax City	51640	82.2%	(21.1%, 97.7%)	75.2%	(69.8%, 79.9%)
Martinsville City	51690	81.7%	(42.6%, 96.4%)	57.6%	(45.9%, 68.6%)
Norton City	51720	48.4%	(7.9%, 91.2%)	72.5%	(65.3%, 78.6%)
Radford City	51750	77.6%	(36.0%, 95.5%)	79.5%	(75.8%, 82.8%)
Roanoke City	51770	69.7%	(58.4%, 79.0%)	75.8%	(72.1%, 79.2%)

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County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Amelia County	51007	64.9%	(34.4%, 86.7%)	77.1%	(70.9%, 82.3%)
Brunswick County	51025	70.5%	(45.3%, 87.3%)	68.7%	(62.2%, 74.5%)
Buckingham County	51029	42.7%	(22.9%, 65.1%)	60.1%	(53.9%, 66.0%)
Charles City County	51036	80.5%	(45.5%, 95.3%)	76.3%	(70.7%, 81.1%)
Charlotte County	51037	69.7%	(35.9%, 90.4%)	56.4%	(50.0%, 62.5%)
Chesterfield County	51041	77.5%	(71.4%, 82.7%)	79.4%	(77.2%, 81.5%)
Cumberland County	51049	77.0%	(41.1%, 94.1%)	64.5%	(61.0%, 67.8%)
Dinwiddie County	51053	76.6%	(57.9%, 88.7%)	71.7%	(67.9%, 75.1%)
Goochland County	51075	90.9%	(70.2%, 95.7%)	78.7%	(75.4%, 81.7%)
Greensville County	51081	80.6%	(47.0%, 95.1%)	65.0%	(53.2%, 75.1%)
Halifax County	51083	68.0%	(50.6%, 81.5%)	61.3%	(56.8%, 65.6%)
Hanover County	51085	81.6%	(70.8%, 89.0%)	77.2%	(74.0%, 80.1%)
Henrico County	51087	75.1%	(68.8%, 80.5%)	76.9%	(74.6%, 79.0%)
Lunenburg County	51111	72.0%	(38.1%, 91.5%)	74.5%	(67.6%, 80.4%)
Mecklenburg County	51117	74.2%	(60.4%, 84.4%)	69.9%	(65.1%, 74.4%)
New Kent County	51127	68.6%	(41.4%, 87.2%)	74.4%	(70.8%, 77.6%)
Nottoway County	51135	79.5%	(56.2%, 92.1%)	71.2%	(66.9%, 75.2%)
Powhatan County	51145	80.7%	(44.4%, 95.7%)	80.1%	(75.7%, 83.9%)
Prince Edward County	51147	61.8%	(37.6%, 81.3%)	64.4%	(60.6%, 68.1%)
Prince George County	51149	73.0%	(52.3%, 87.0%)	73.9%	(70.6%, 77.0%)
Surry County	51181	68.2%	(25.8%, 93.0%)	70.1%	(65.1%, 74.7%)
Sussex County	51183	76.6%	(45.0%, 92.9%)	66.2%	(59.4%, 72.4%)
Colonial Heights City	51570	61.1%	(25.3%, 87.9%)	77.8%	(73.0%, 82.0%)
Emporia City	51595	13.8%	(2.2%, 75.1%)	63.0%	(40.4%, 81.1%)
Hopewell City	51670	62.3%	(34.4%, 83.9%)	77.1%	(72.2%, 81.4%)
Petersburg City	51730	85.7%	(73.9%, 92.7%)	78.0%	(71.8%, 83.1%)
Richmond City	51760	81.1%	(73.6%, 86.9%)	79.0%	(74.8%, 82.6%)

Indicator 21: Physical Activity in the Past Month

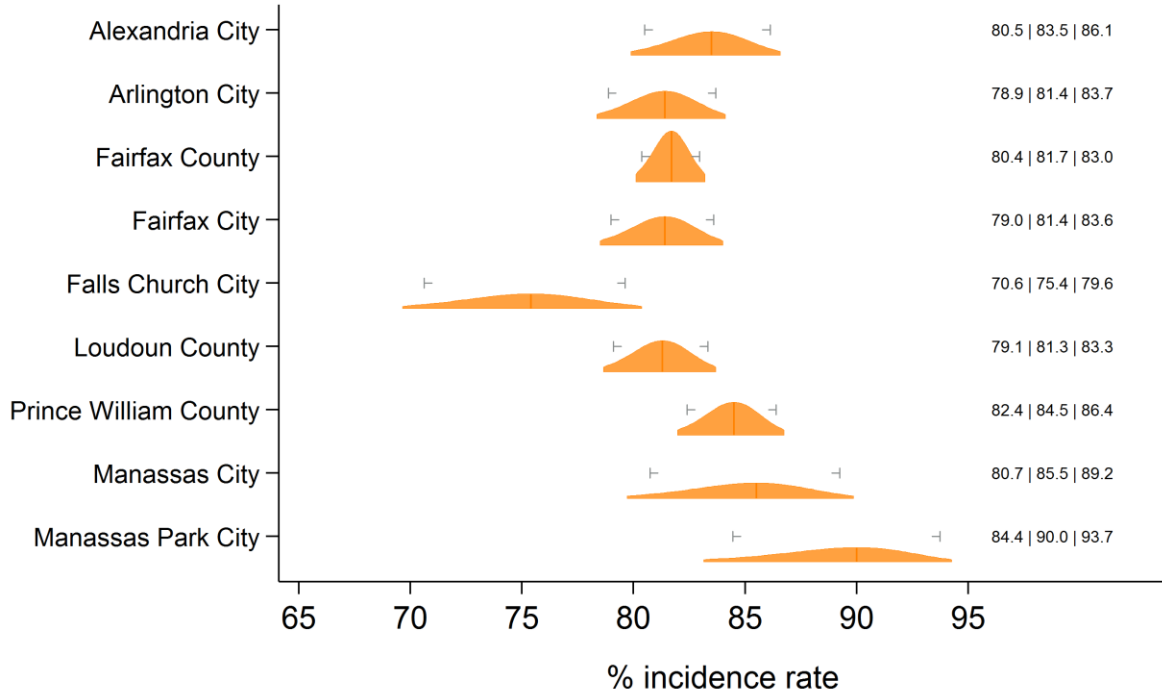


County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Accomack County	51001	77.7%	(63.0%, 87.7%)	75.8%	(71.9%, 79.4%)
Essex County	51057	81.5%	(55.3%, 94.0%)	77.9%	(72.8%, 82.4%)
Gloucester County	51073	79.9%	(63.2%, 90.2%)	74.7%	(71.7%, 77.5%)
Isle of Wight County	51093	75.3%	(58.5%, 86.8%)	65.7%	(61.5%, 69.7%)
James City County	51095	87.8%	(76.3%, 94.2%)	80.2%	(77.0%, 83.1%)
King and Queen County	51097	93.6%	(38.2%, 97.9%)	76.4%	(71.9%, 80.3%)
King William County	51101	69.8%	(44.8%, 86.8%)	73.6%	(68.8%, 77.9%)
Lancaster County	51103	77.1%	(54.5%, 90.4%)	76.5%	(72.1%, 80.4%)
Mathews County	51115	84.4%	(61.8%, 94.8%)	74.8%	(69.3%, 79.5%)
Middlesex County	51119	85.2%	(49.8%, 97.1%)	76.2%	(72.6%, 79.4%)
Northampton County	51131	71.2%	(49.0%, 86.4%)	64.1%	(55.4%, 72.0%)
Northumberland County	51133	52.8%	(28.7%, 75.6%)	70.8%	(66.2%, 75.1%)
Richmond County	51159	84.6%	(68.5%, 93.3%)	75.2%	(69.9%, 79.9%)
Southampton County	51175	69.5%	(39.6%, 88.8%)	70.3%	(66.7%, 73.7%)
Westmoreland County	51193	46.4%	(22.1%, 72.6%)	73.7%	(70.2%, 77.0%)
York County	51199	77.7%	(64.3%, 87.1%)	76.8%	(73.9%, 79.6%)
Chesapeake City	51550	75.5%	(68.2%, 81.7%)	78.2%	(75.4%, 80.7%)
Franklin City	51620	64.1%	(43.2%, 80.7%)	74.6%	(64.9%, 82.4%)
Hampton City	51650	75.2%	(66.0%, 82.6%)	73.2%	(69.8%, 76.4%)
Newport News City	51700	77.8%	(67.4%, 85.6%)	75.6%	(71.9%, 79.0%)
Norfolk City	51710	77.9%	(70.4%, 83.9%)	74.4%	(71.3%, 77.4%)
Poquoson City	51735	84.8%	(38.2%, 98.1%)	79.9%	(74.1%, 84.6%)
Portsmouth City	51740	69.1%	(57.6%, 78.6%)	71.9%	(68.7%, 74.9%)
Suffolk City	51800	57.8%	(44.8%, 69.8%)	75.0%	(71.7%, 78.1%)
Virginia Beach City	51810	78.6%	(72.2%, 83.9%)	78.2%	(76.1%, 80.2%)
Williamsburg City	51830	80.4%	(31.1%, 95.8%)	74.8%	(71.2%, 78.0%)



Section 4: Graphical representation

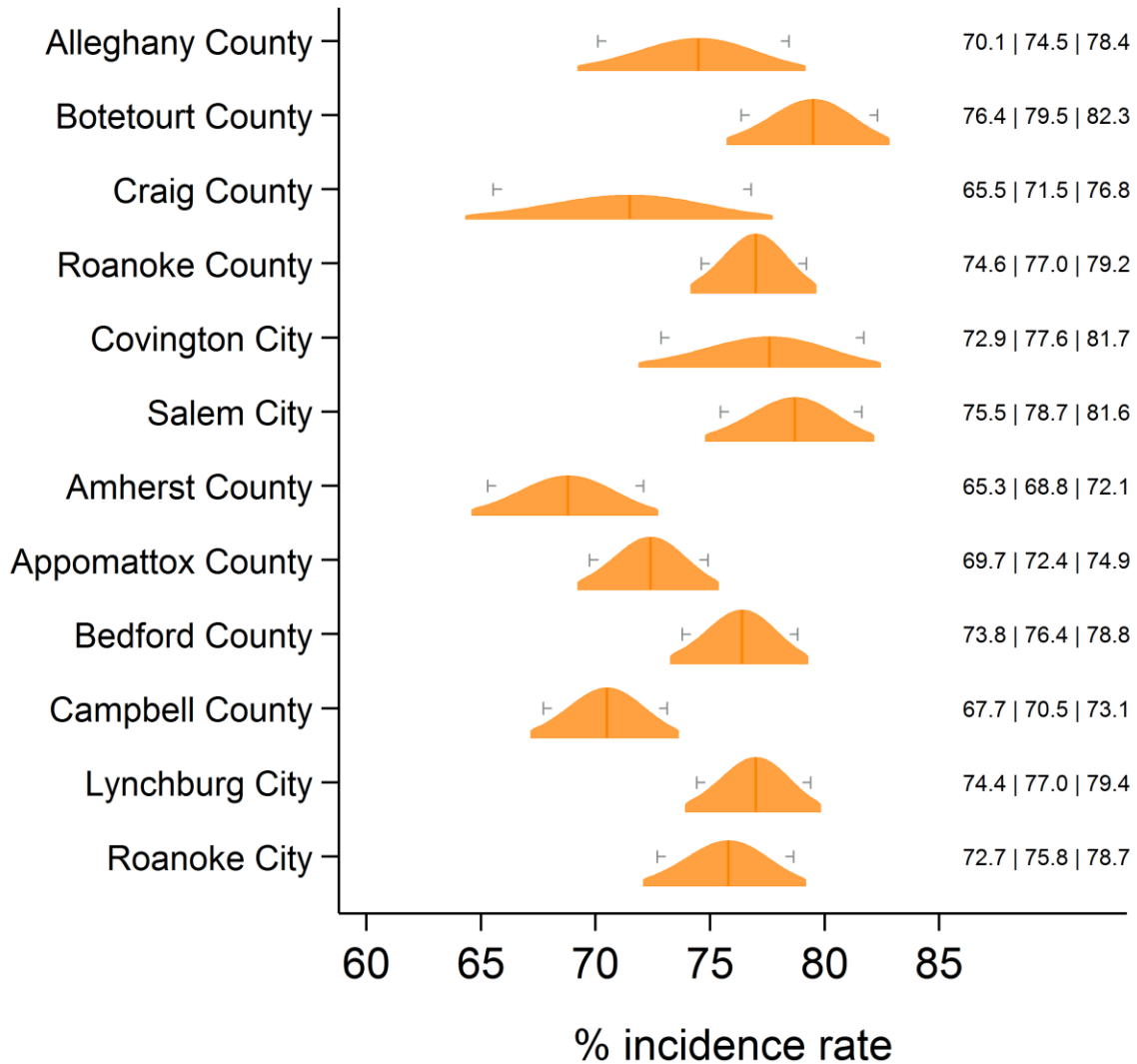
Physical activity past month
Alexandria, Fairfax, Arlington, Loudon, Prince William HDs



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



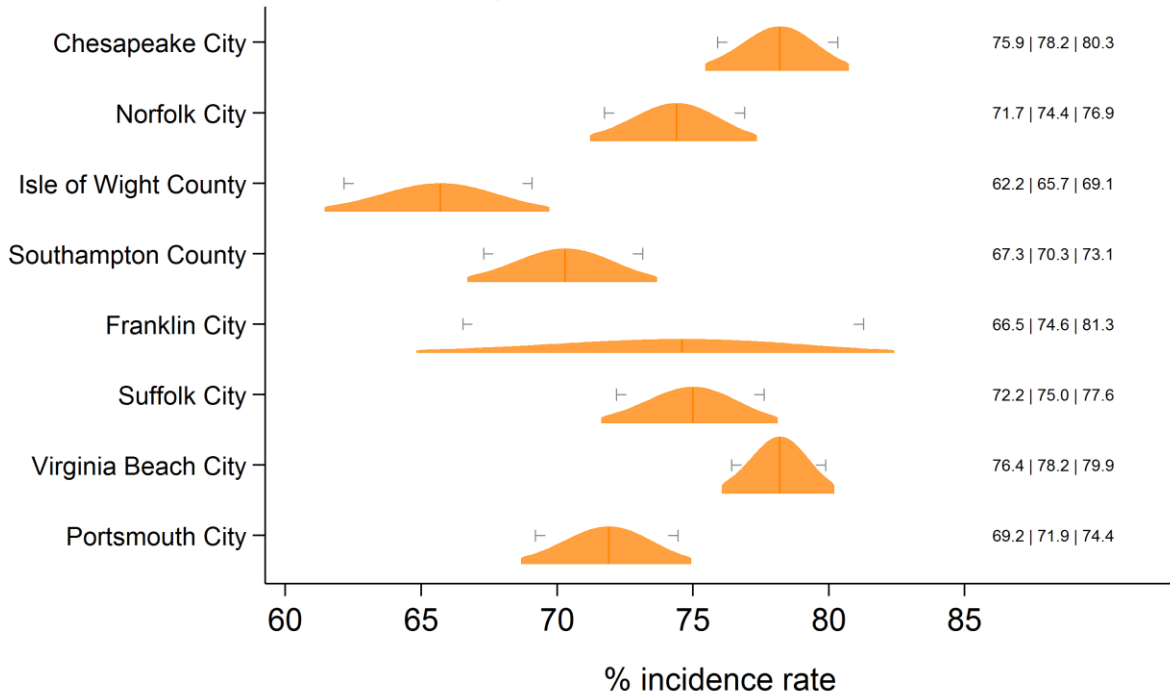
Physical activity past month Alleghany, Roanoke and Central Virginia HDs



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



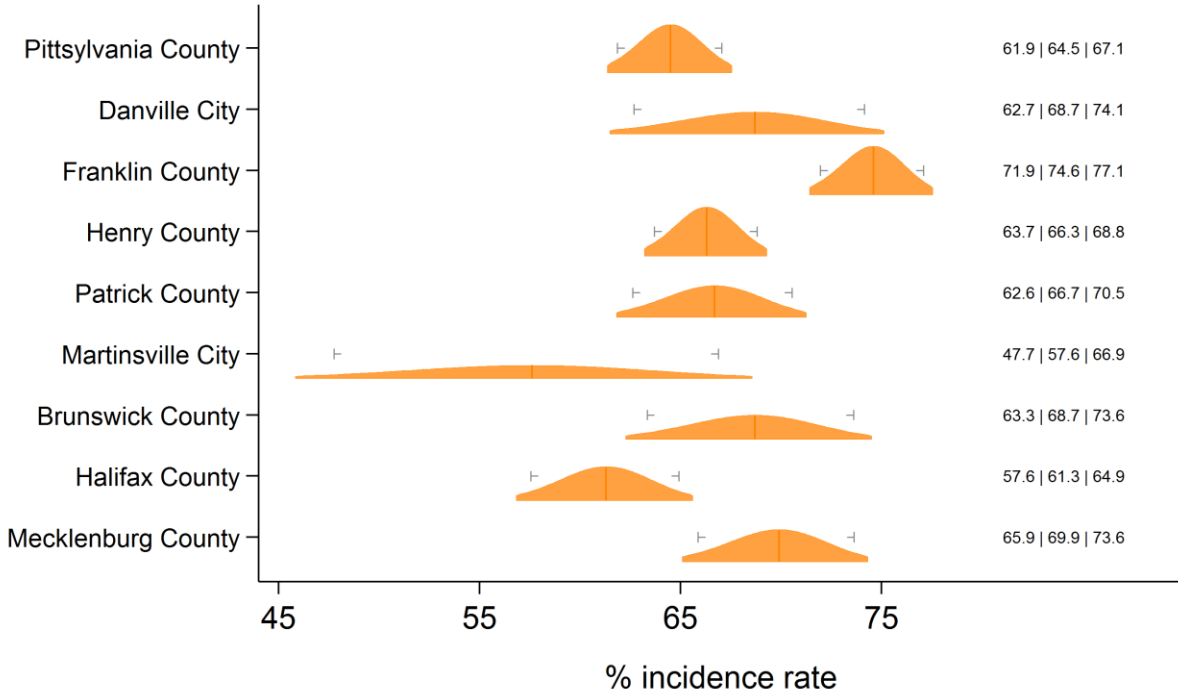
Physical activity past month Norfolk, Portsmouth, Chesapeake, VA Beach, W. Tidewater HDs



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



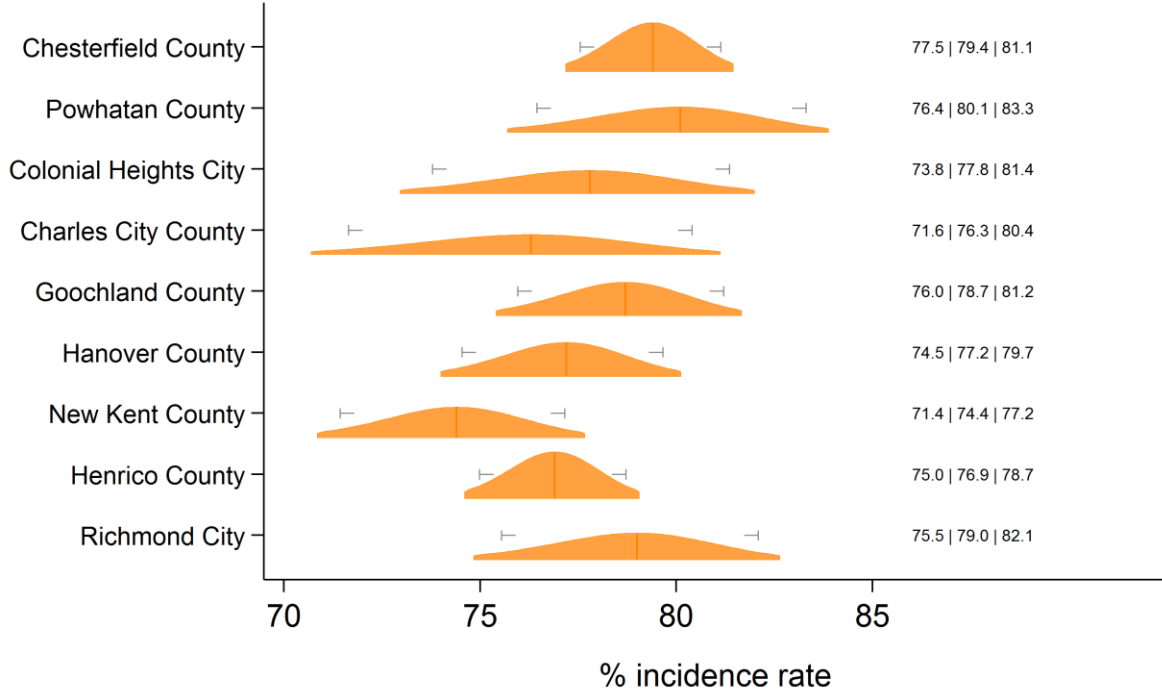
Physical activity past month Pittsylvania/Danville, Southside and West Piedmont HDs



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



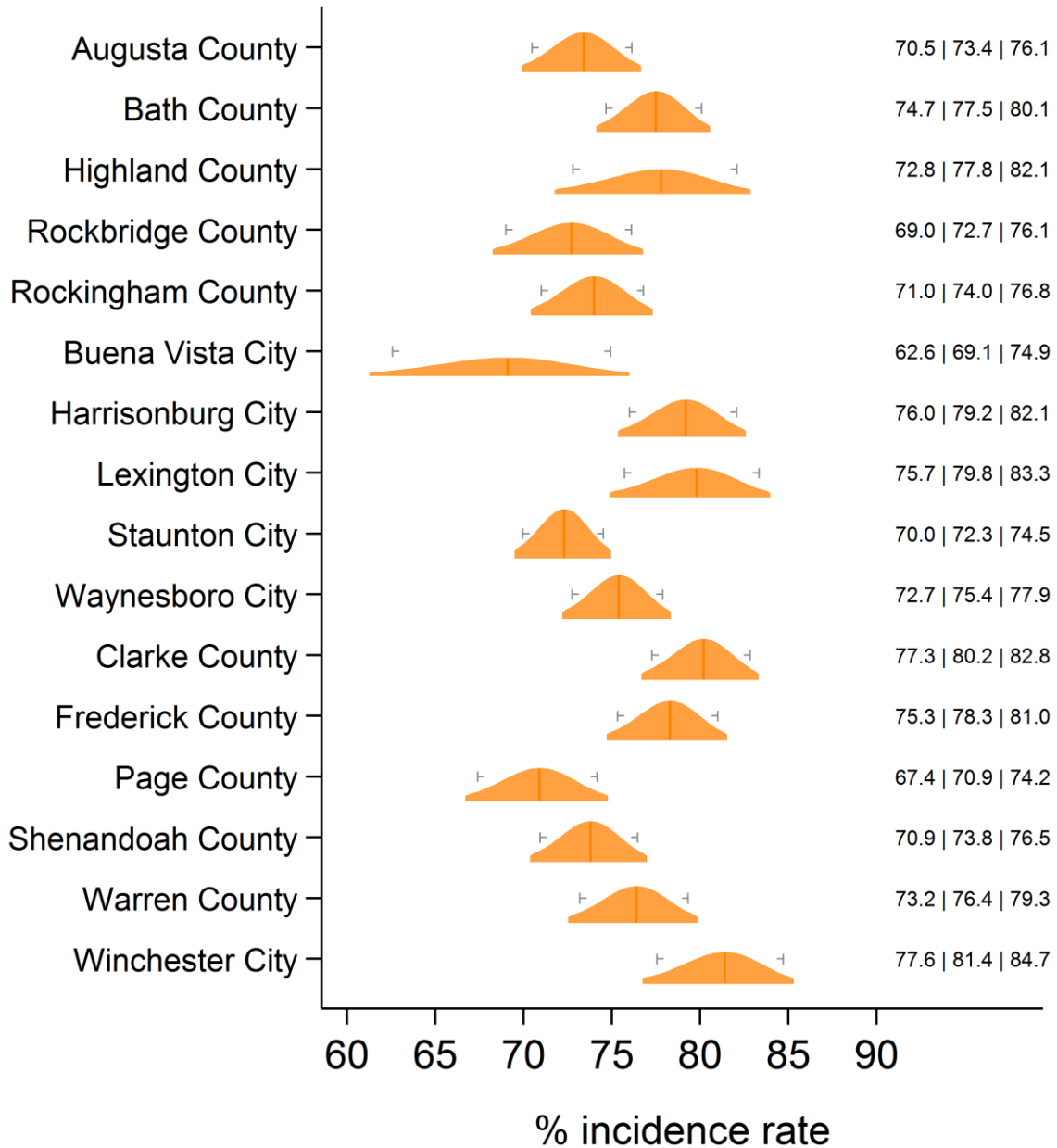
Physical activity past month Chesterfield, Chickahominy, Henrico and Richmond HDs



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



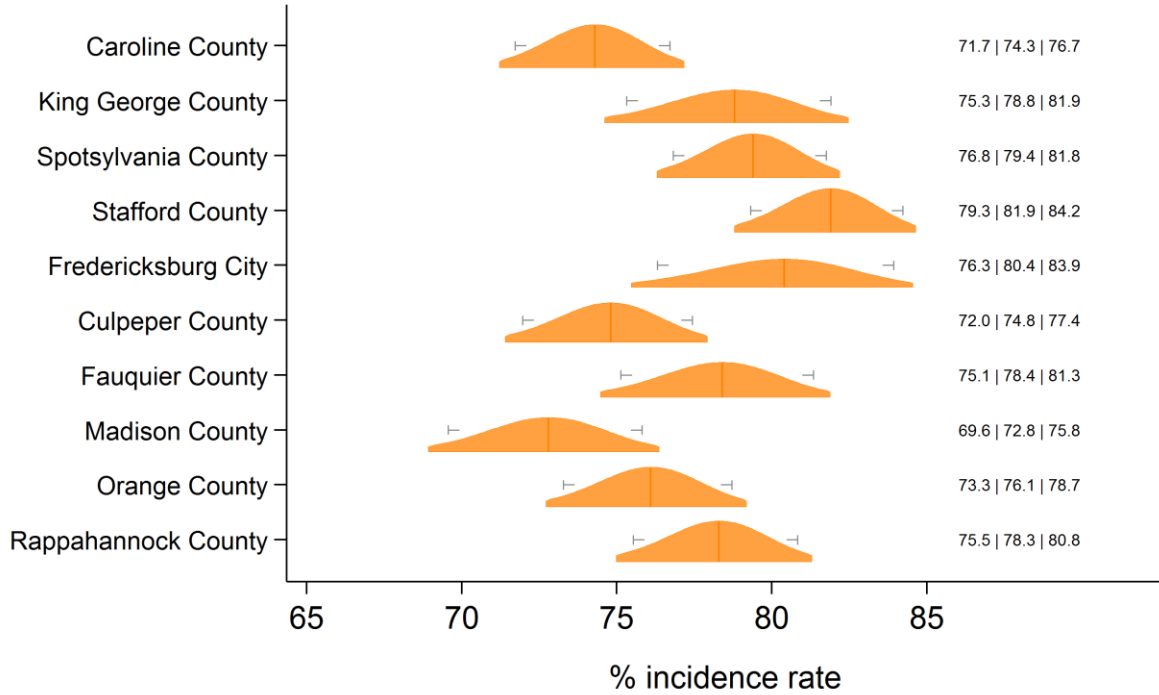
Physical activity past month Central Shenandoah and Lord Fairfax HDs



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



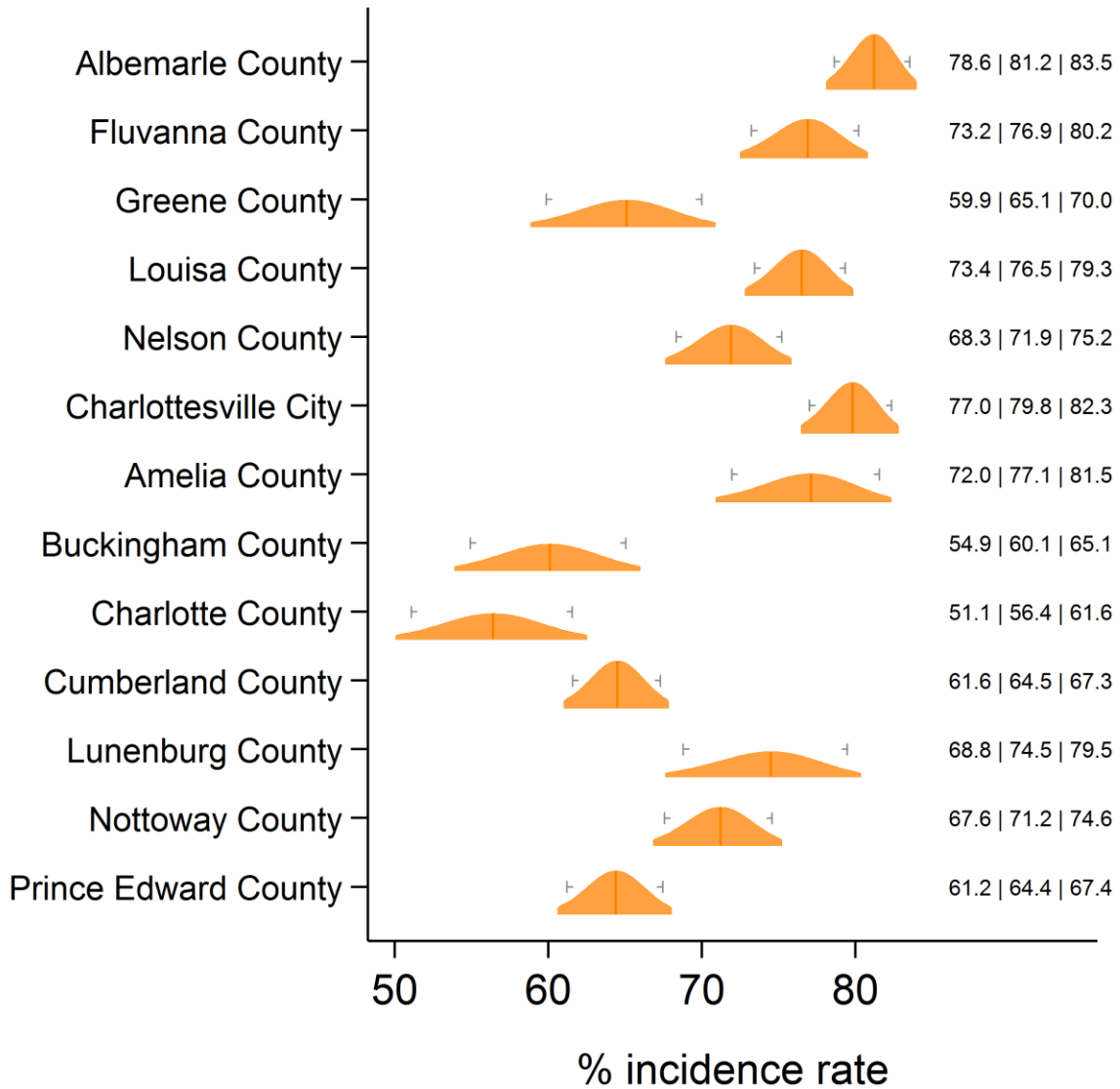
Physical activity past month Rappahannock/Rapidan and Rappahannock HDs



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



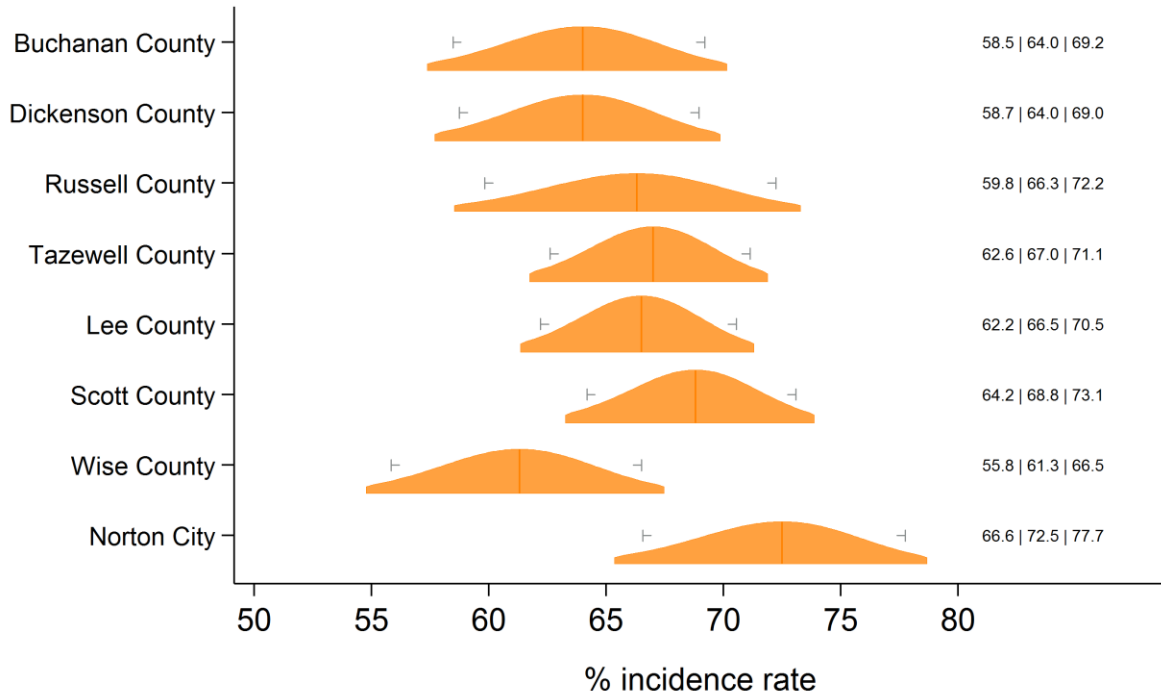
Physical activity past month Thomas Jefferson and Piedmont HDs



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



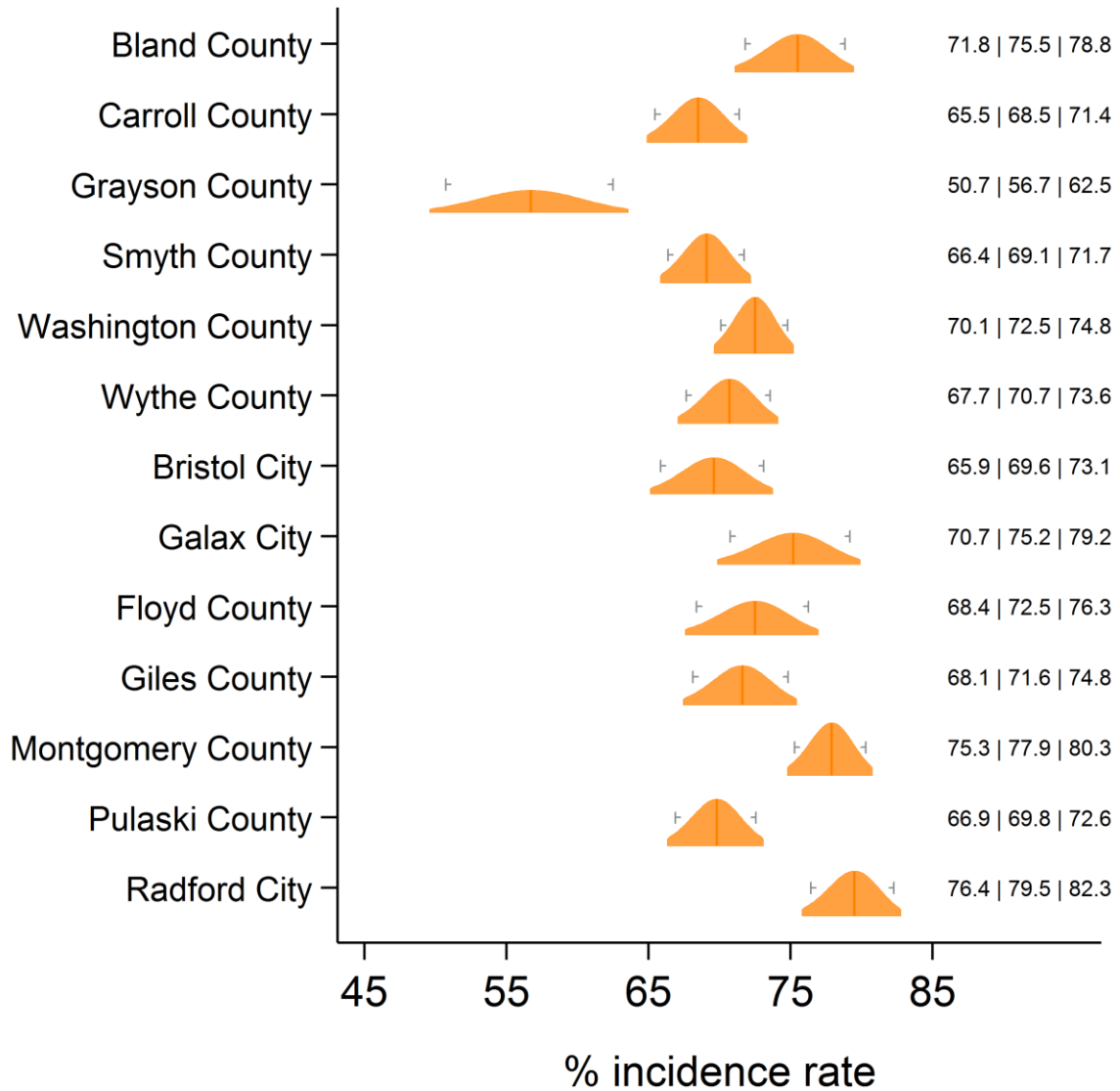
Physical activity past month Cumberland Plateau and Lenowisco HDs



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



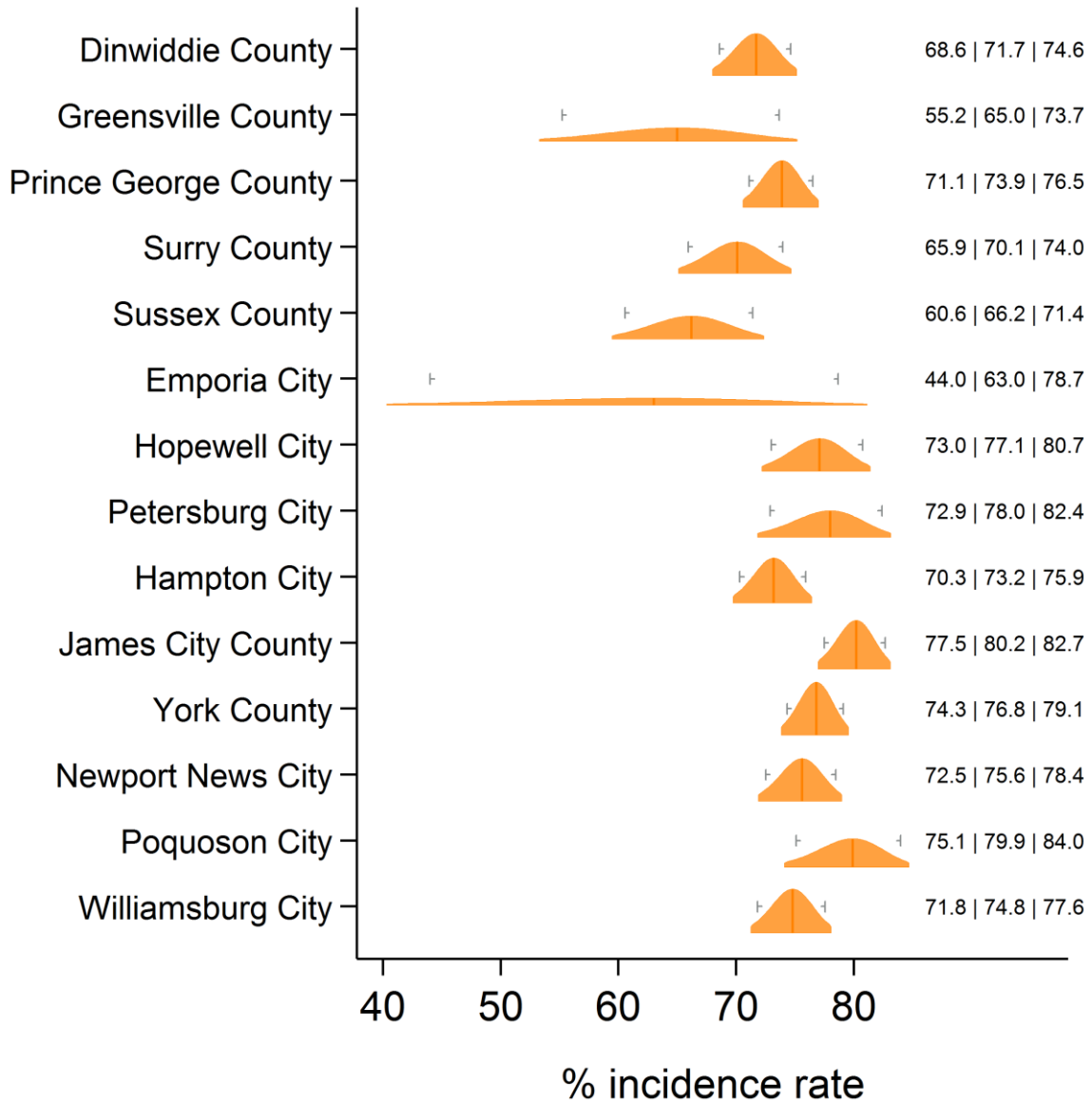
Physical activity past month New River and Mount Rogers HDs



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



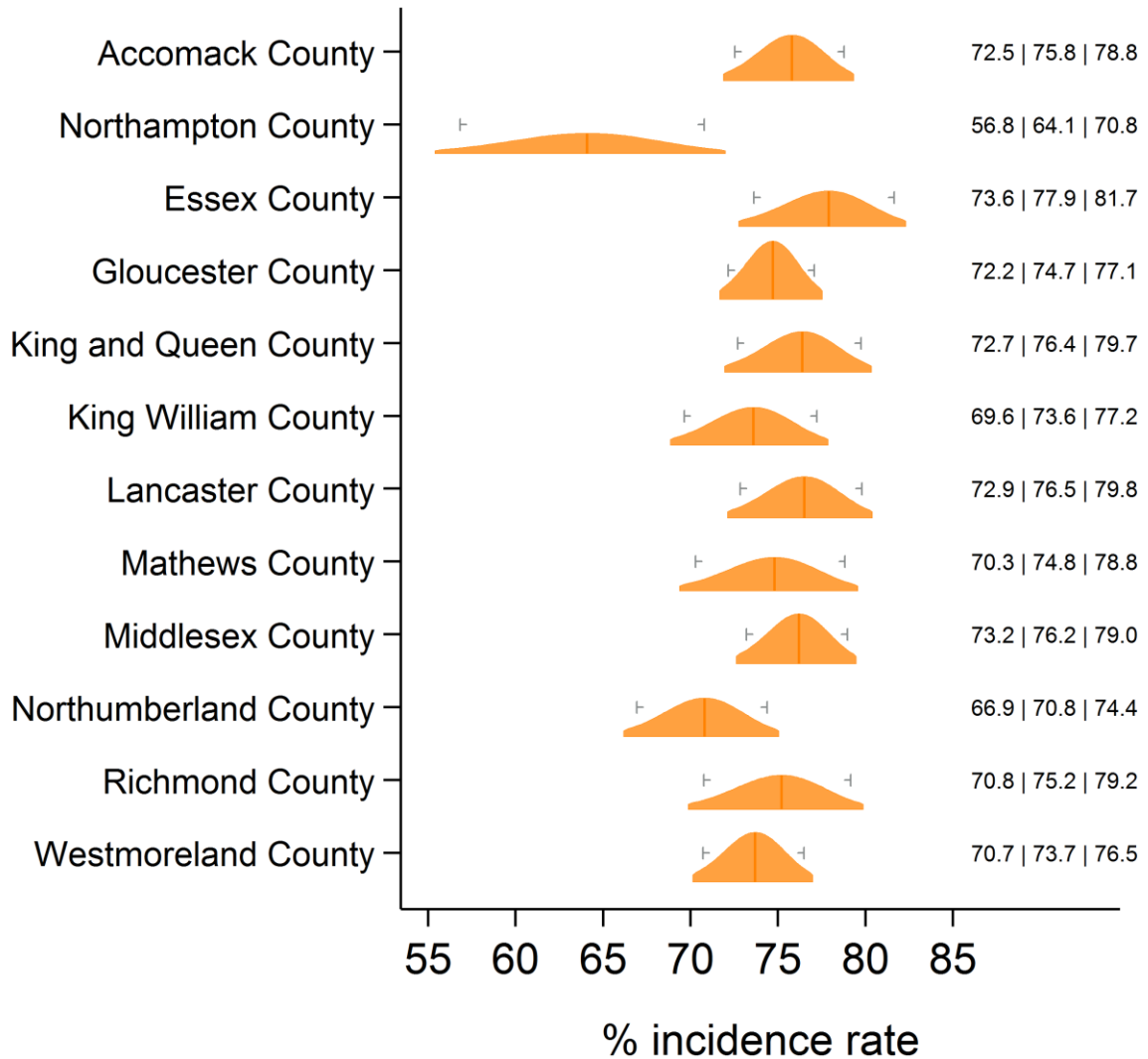
Physical activity past month Crater, Peninsula and Hampton HDs



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



Physical activity past month Eastern Shore and Three Rivers HDs



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



Section 5: Additional diagnostics

Direct estimate is inside the 95% SAE Wilson CI: 57 areas.

Direct estimate is outside the 95% SAE Wilson CI: 76 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: 120 areas.

SAE Wilson 95% CI partially overlaps with the 95% direct Wilson CI: 13 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: 0 areas.

Direct standard error is zero: 3 areas.

Proportion of SAE variance due to ACS sampling error: min = 1.10%; med = 37.45%; max = 82.50%.

Proportion of SAE variance to sampling error in regression coefficient estimates: min = 17.42%; med = 61.96%; max = 95.63%.

Proportion of SAE variance due to model selection: min = 0.03%; med = 0.54%; max = 6.35%.