



Indicator 30: How often in the past 12 months would you say you were worried or stressed about having enough money to buy nutritious meals?

Internal variable name: outc30_pay_food

Section 1: Definition

Definition: How often in the past 12 months would you say you were worried or stressed about having enough money to buy nutritious meals?

Section 2: Predictive models

	Mixed, demos	Logit, no area	Mixed with
	only	effects	area covariates
	b/se	b/se	b/se
Outcome 30: How often in the past 12 months			
would you say you were worried or stressed			
about having enough money to buy nutritious meals?			
Non-Hispanic Black vs. Non-Hispanic White	0.2799***	0.2628**	0.2628***
	(0.0753)	(0.0910)	(0.0752)
Non-Hispanic Asian vs. Non-Hispanic White	-0.1526	-0.0856	-0.0856
	(0.3050)	(0.2327)	(0.3039)
Non-Hispanic Other vs. Non-Hispanic White	0.4430**	0.4334**	0.4334**
	(0.1392)	(0.1609)	(0.1369)
Hispanic vs. Non-Hispanic White	0.8289***	0.8777***	0.8777***
	(0.1747)	(0.1633)	(0.1835)
Female	0.5513***	0.5320***	0.5320***
	(0.0716)	(0.0695)	(0.0732)
Age 18-24 vs. 65+	1.4107***	1.4155***	1.4155***
	(0.1616)	(0.1417)	(0.1601)
Age 25-34 vs. 65+	1.3888***	1.3987***	1.3987***
	(0.0986)	(0.1138)	(0.0985)
Age 35-44 vs. 65+	1.2294***	1.2448***	1.2448***
	(0.1263)	(0.1072)	(0.1258)
Age 45-54 vs. 65+	1.0273***	1.0511***	1.0511***
	(0.1187)	(0.0975)	(0.1197)
Age 55-64 vs. 65+	0.6393***	0.6427***	0.6427***
	(0.1075)	(0.0946)	(0.1066)
% education below High School, population 25+		0.0454***	0.0454***
years old			
		(0.0107)	(0.0098)





Leukemia Cancer Male Rate		0.0067	0.0067
		(0.0047)	(0.0043)
Crude mortality rate of influenza/pneumonia per		0.1269***	0.1269***
10,000			
		(0.0347)	(0.0335)
% occupied HUs - renter-occupied		0.0073	0.0073*
		(0.0040)	(0.0033)
% without health insurance, total population		-0.0273	-0.0273
		(0.0188)	(0.0166)
Pancreas Cancer All Rate		0.0145	0.0145*
		(0.0077)	(0.0064)
Stomach Cancer Female Rate		0.0080	0.0080
		(0.0163)	(0.0111)
{Pancreas Cancer All Rate}		-0.0024*	-0.0024**
interacted with {Stomach Cancer Female Rate}		(0.0012)	(0.0009)
% Hispanic among adults 18 to 64		-0.1397*	-0.1397**
		(0.0624)	(0.0497)
% rent >30% of income		-0.0227**	-0.0227**
		(0.0083)	(0.0068)
{% Hispanic among adults 18 to 64}		0.0026*	0.0026*
interacted with {% rent >30% of income}		(0.0013)	(0.0010)
Intercept	-1.8909***	-1.7436***	-1.7436***
	(0.1026)	(0.4174)	(0.3436)
Area effect variance	0.1156**		0.0000
	(0.0357)		(0.0000)

Number of alternative models used to estimate model error = 1.





Section 3: Results

County name	County FIPS	Direct	Direct 95% Cl	SAE	SAE 95% CI
		estimate		composite	
Augusta County	51015	31.0%	(22.6%, 41.0%)	34.0%	(31.7%, 36.4%)
Bath County	51017	22.2%	(5.0%, 60.5%)	22.3%	(15.4%, 31.3%)
Caroline County	51033	44.8%	(24.1%, 67.5%)	37.7%	(33.2%, 42.4%)
Clarke County	51043	33.3%	(14.7%, 59.0%)	29.3%	(26.3%, 32.6%)
Culpeper County	51047	49.3%	(34.3%, 64.4%)	37.2%	(34.0%, 40.5%)
Fauquier County	51061	42.4%	(29.6%, 56.3%)	29.7%	(27.3%, 32.2%)
Frederick County	51069	34.3%	(23.8%, 46.6%)	35.7%	(32.8%, 38.7%)
Highland County	51091	0.0%	(0.0%, 83.2%)	20.4%	(10.8%, 35.0%)
King George County	51099	8.8%	(2.9%, 36.4%)	37.1%	(33.1%, 41.3%)
Madison County	51113	19.2%	(8.4%, 38.1%)	31.8%	(26.4%, 37.8%)
Orange County	51137	37.2%	(21.7%, 55.9%)	33.9%	(30.4%, 37.6%)
Page County	51139	69.3%	(42.5%, 87.3%)	47.8%	(41.8%, 53.9%)
Rappahannock County	51157	55.4%	(28.3%, 79.6%)	46.5%	(40.0%, 53.2%)
Rockbridge County	51163	42.4%	(23.9%, 63.4%)	29.0%	(25.5%, 32.8%)
Rockingham County	51165	31.4%	(21.0%, 44.1%)	36.0%	(33.0%, 39.1%)
Shenandoah County	51171	46.0%	(30.8%, 62.0%)	43.1%	(38.6%, 47.7%)
Spotsylvania County	51177	32.8%	(21.4%, 46.7%)	30.3%	(27.9%, 32.8%)
Stafford County	51179	29.6%	(20.6%, 40.6%)	28.9%	(26.2%, 31.8%)
Warren County	51187	41.5%	(23.0%, 62.8%)	32.5%	(29.7%, 35.4%)
Buena Vista City	51530	100.0%	(0.6%, 100.0%)	34.9%	(29.1%, 41.2%)
Fredericksburg City	51630	37.0%	(18.8%, 59.9%)	28.5%	(24.2%, 33.3%)
Harrisonburg City	51660	78.7%	(45.5%, 94.2%)	40.8%	(32.6%, 49.5%)
Lexington City	51678	0.0%	(0.0%, 99.4%)	62.9%	(47.6%, 76.0%)
Staunton City	51790	18.4%	(2.5%, 66.8%)	32.9%	(27.4%, 39.1%)
Waynesboro City	51820	15.3%	(3.3%, 48.8%)	37.6%	(32.5%, 43.0%)
Winchester City	51840	63.0%	(35.7%, 83.9%)	44.5%	(37.2%, 52.0%)





County name	County FIPS	Direct	Direct 95% Cl	SAE	SAE 95% CI
		estimate		composite	
Albemarle County	51003	24.7%	(15.9%, 36.1%)	32.2%	(29.5%, 35.0%)
Alleghany County	51005	46.8%	(28.7%, 65.7%)	44.9%	(40.1%, 49.7%)
Amherst County	51009	24.7%	(9.2%, 51.5%)	34.0%	(29.0%, 39.3%)
Appomattox County	51011	41.8%	(22.0%, 64.6%)	32.2%	(28.4%, 36.2%)
Arlington City	51013	33.6%	(22.2%, 47.1%)	32.1%	(27.6%, 36.9%)
Bedford County	51019	38.1%	(26.2%, 51.7%)	32.6%	(28.7%, 36.7%)
Botetourt County	51023	28.8%	(16.8%, 44.7%)	30.9%	(26.0%, 36.3%)
Campbell County	51031	29.4%	(16.7%, 46.3%)	35.9%	(32.9%, 39.0%)
Craig County	51045	50.3%	(6.5%, 93.7%)	47.9%	(32.4%, 63.8%)
Fairfax County	51059	23.8%	(18.7%, 29.9%)	26.4%	(24.0%, 28.9%)
Fluvanna County	51065	27.0%	(10.1%, 54.9%)	37.0%	(32.8%, 41.6%)
Greene County	51079	42.1%	(19.4%, 68.7%)	45.6%	(41.5%, 49.7%)
Loudoun County	51107	28.9%	(21.6%, 37.4%)	25.3%	(23.0%, 27.6%)
Louisa County	51109	22.4%	(10.7%, 41.1%)	39.3%	(33.2%, 45.8%)
Nelson County	51125	31.7%	(14.5%, 56.1%)	36.4%	(30.4%, 42.9%)
Prince William County	51153	31.0%	(23.3%, 39.9%)	30.8%	(27.2%, 34.8%)
Roanoke County	51161	33.2%	(24.0%, 43.9%)	31.3%	(28.5%, 34.3%)
Alexandria City	51510	28.5%	(16.7%, 44.3%)	28.6%	(24.6%, 33.0%)
Charlottesville City	51540	51.5%	(25.3%, 76.9%)	47.9%	(41.6%, 54.3%)
Covington City	51580	0.0%	(0.0%, 99.4%)	44.5%	(37.8%, 51.5%)
Fairfax City	51600	22.0%	(10.6%, 40.1%)	27.2%	(22.9%, 32.0%)
Falls Church City	51610	52.0%	(8.2%, 92.9%)	37.5%	(31.3%, 44.2%)
Lynchburg City	51680	51.8%	(34.9%, 68.3%)	39.1%	(35.5%, 42.8%)
Manassas City	51683	23.7%	(6.3%, 58.9%)	46.9%	(31.7%, 62.7%)
Manassas Park City	51685	18.1%	(0.4%, 97.5%)	21.8%	(15.5%, 29.8%)
Salem City	51775	53.4%	(18.1%, 85.6%)	37.5%	(33.8%, 41.3%)





County name	County FIPS	Direct	Direct 95% Cl	SAE	SAE 95% CI
		estimate		composite	
Bland County	51021	38.4%	(9.8%, 78.1%)	48.1%	(42.8%, 53.3%)
Buchanan County	51027	46.7%	(31.3%, 62.7%)	41.2%	(33.6%, 49.4%)
Carroll County	51035	35.8%	(20.4%, 54.9%)	39.1%	(35.4%, 42.9%)
Dickenson County	51051	36.1%	(20.7%, 55.1%)	48.3%	(42.0%, 54.6%)
Floyd County	51063	26.5%	(12.8%, 46.9%)	36.5%	(31.5%, 41.9%)
Franklin County	51067	34.3%	(18.3%, 54.8%)	31.9%	(29.2%, 34.7%)
Giles County	51071	41.1%	(17.7%, 69.4%)	37.0%	(32.2%, 42.0%)
Grayson County	51077	33.4%	(14.3%, 60.0%)	43.2%	(39.6%, 46.9%)
Henry County	51089	40.9%	(28.6%, 54.4%)	42.0%	(38.9%, 45.1%)
Lee County	51105	66.5%	(46.9%, 81.7%)	48.3%	(43.7%, 52.9%)
Montgomery County	51121	38.4%	(26.7%, 51.5%)	30.9%	(27.0%, 35.0%)
Patrick County	51141	36.5%	(18.8%, 58.8%)	40.8%	(37.0%, 44.7%)
Pittsylvania County	51143	39.2%	(29.0%, 50.4%)	38.8%	(35.8%, 41.8%)
Pulaski County	51155	37.6%	(23.6%, 54.1%)	35.7%	(31.6%, 40.0%)
Russell County	51167	43.9%	(27.1%, 62.2%)	53.1%	(46.3%, 59.7%)
Scott County	51169	44.1%	(29.7%, 59.6%)	44.1%	(40.2%, 48.0%)
Smyth County	51173	49.2%	(31.7%, 66.9%)	41.6%	(38.9%, 44.3%)
Tazewell County	51185	35.4%	(22.3%, 51.2%)	46.7%	(42.0%, 51.6%)
Washington County	51191	47.8%	(33.8%, 62.1%)	39.8%	(35.7%, 44.1%)
Wise County	51195	44.2%	(31.2%, 58.0%)	37.9%	(31.3%, 45.0%)
Wythe County	51197	43.3%	(28.1%, 59.9%)	43.6%	(39.4%, 47.9%)
Bristol City	51520	71.2%	(30.7%, 93.3%)	50.9%	(43.0%, 58.8%)
Danville City	51590	39.7%	(19.6%, 63.9%)	47.7%	(40.6%, 54.9%)
Galax City	51640	64.4%	(13.6%, 94.8%)	44.0%	(30.4%, 58.6%)
Martinsville City	51690	70.2%	(31.4%, 92.3%)	53.9%	(48.6%, 59.1%)
Norton City	51720	51.6%	(8.8%, 92.1%)	48.8%	(42.1%, 55.5%)
Radford City	51750	60.4%	(15.8%, 92.5%)	44.7%	(34.8%, 55.0%)
Roanoke City	51770	37.4%	(27.1%, 49.0%)	37.8%	(34.5%, 41.2%)





County name	County FIPS	Direct	Direct 95% Cl	SAE	SAE 95% CI
		estimate		composite	
Amelia County	51007	23.9%	(9.7%, 47.8%)	35.8%	(30.4%, 41.5%)
Brunswick County	51025	50.9%	(26.4%, 74.9%)	45.8%	(39.2%, 52.5%)
Buckingham County	51029	42.5%	(21.3%, 66.9%)	43.8%	(36.3%, 51.6%)
Charles City County	51036	34.0%	(11.0%, 68.3%)	44.0%	(35.9%, 52.4%)
Charlotte County	51037	48.5%	(21.4%, 76.5%)	51.5%	(39.3%, 63.5%)
Chesterfield County	51041	32.1%	(25.9%, 39.1%)	33.2%	(31.1%, 35.4%)
Cumberland County	51049	28.5%	(10.5%, 57.8%)	39.4%	(33.7%, 45.5%)
Dinwiddie County	51053	41.6%	(22.0%, 64.2%)	43.6%	(39.7%, 47.6%)
Goochland County	51075	25.2%	(10.2%, 50.0%)	30.8%	(27.2%, 34.7%)
Greensville County	51081	34.2%	(11.5%, 67.6%)	50.3%	(42.9%, 57.7%)
Halifax County	51083	30.1%	(18.3%, 45.2%)	38.3%	(35.0%, 41.7%)
Hanover County	51085	27.4%	(18.8%, 38.1%)	31.0%	(28.3%, 33.8%)
Henrico County	51087	30.5%	(24.5%, 37.4%)	35.8%	(32.8%, 39.0%)
Lunenburg County	51111	66.2%	(37.9%, 86.2%)	57.9%	(49.9%, 65.5%)
Mecklenburg County	51117	47.6%	(31.4%, 64.3%)	45.4%	(39.5%, 51.3%)
New Kent County	51127	44.9%	(21.6%, 70.7%)	38.5%	(33.6%, 43.5%)
Nottoway County	51135	48.2%	(24.6%, 72.6%)	40.9%	(36.0%, 45.9%)
Powhatan County	51145	48.4%	(19.0%, 78.9%)	36.2%	(32.9%, 39.7%)
Prince Edward County	51147	38.2%	(19.9%, 60.6%)	37.4%	(33.3%, 41.7%)
Prince George County	51149	30.7%	(15.1%, 52.6%)	34.0%	(30.8%, 37.4%)
Surry County	51181	60.4%	(22.6%, 88.8%)	45.2%	(37.5%, 53.1%)
Sussex County	51183	69.4%	(43.8%, 86.9%)	59.8%	(50.1%, 68.9%)
Colonial Heights City	51570	87.9%	(42.3%, 97.8%)	40.3%	(34.8%, 46.0%)
Emporia City	51595	73.0%	(17.1%, 97.3%)	69.4%	(56.8%, 79.7%)
Hopewell City	51670	53.8%	(26.7%, 78.8%)	46.3%	(41.5%, 51.3%)
Petersburg City	51730	39.7%	(23.5%, 58.4%)	44.2%	(39.0%, 49.5%)
Richmond City	51760	42.2%	(33.6%, 51.4%)	43.1%	(39.3%, 47.0%)





County name	County FIPS	Direct	Direct 95% Cl	SAE	SAE 95% CI
		estimate		composite	
Accomack County	51001	46.9%	(27.9%, 66.8%)	42.4%	(37.6%, 47.4%)
Essex County	51057	38.2%	(15.1%, 68.2%)	41.9%	(33.4%, 50.9%)
Gloucester County	51073	40.1%	(23.3%, 59.6%)	29.3%	(25.8%, 33.1%)
Isle of Wight County	51093	32.6%	(19.9%, 48.4%)	36.6%	(33.5%, 39.7%)
James City County	51095	25.8%	(15.6%, 39.6%)	27.4%	(24.8%, 30.0%)
King and Queen County	51097	89.6%	(35.7%, 97.1%)	41.5%	(34.8%, 48.6%)
King William County	51101	22.6%	(8.1%, 49.2%)	25.9%	(22.0%, 30.2%)
Lancaster County	51103	36.9%	(13.1%, 69.5%)	39.1%	(34.8%, 43.6%)
Mathews County	51115	7.5%	(2.6%, 28.3%)	22.9%	(18.9%, 27.5%)
Middlesex County	51119	71.8%	(36.2%, 92.0%)	41.2%	(34.5%, 48.2%)
Northampton County	51131	46.6%	(26.6%, 67.8%)	48.3%	(40.8%, 55.8%)
Northumberland County	51133	18.9%	(7.1%, 41.5%)	29.0%	(22.4%, 36.6%)
Richmond County	51159	53.0%	(33.5%, 71.6%)	52.6%	(43.0%, 62.1%)
Southampton County	51175	28.7%	(10.0%, 59.5%)	38.8%	(35.5%, 42.2%)
Westmoreland County	51193	46.1%	(18.8%, 75.9%)	39.9%	(34.9%, 45.1%)
York County	51199	26.2%	(13.4%, 45.0%)	28.0%	(25.3%, 30.9%)
Chesapeake City	51550	33.4%	(26.0%, 41.7%)	31.2%	(29.1%, 33.3%)
Franklin City	51620	41.9%	(23.6%, 62.8%)	46.7%	(40.1%, 53.4%)
Hampton City	51650	35.6%	(27.1%, 45.2%)	34.2%	(31.5%, 37.0%)
Newport News City	51700	44.5%	(34.0%, 55.6%)	38.1%	(34.7%, 41.6%)
Norfolk City	51710	30.7%	(23.1%, 39.4%)	36.2%	(32.6%, 40.1%)
Poquoson City	51735	60.3%	(17.3%, 91.7%)	36.7%	(29.9%, 44.0%)
Portsmouth City	51740	41.3%	(29.4%, 54.3%)	41.6%	(38.3%, 44.9%)
Suffolk City	51800	26.8%	(16.5%, 40.5%)	36.0%	(33.3%, 38.9%)
Virginia Beach City	51810	29.3%	(23.1%, 36.3%)	30.9%	(28.5%, 33.5%)
Williamsburg City	51830	29.7%	(5.9%, 73.8%)	37.6%	(30.2%, 45.6%)





Section 4: Graphical representation

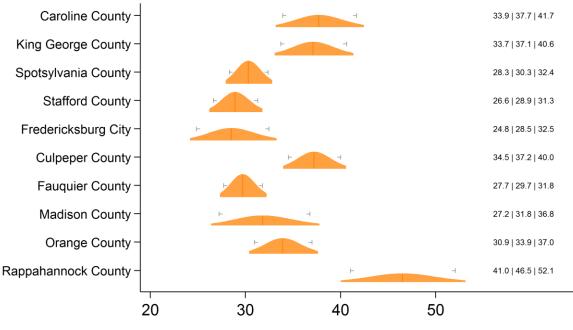
Stressed about buying food past 12 months Central Shenandoah and Lord Fairfax HDs

	P 1			32.1 34.0 36.0	
F	+			16.3 22.3 29.7	
F	ł			12.1 20.4 32.4	
	F 4			26.0 29.0 32.1	
	F .	1		33.5 36.0 38.6	
	F	1		30.0 34.9 40.1	
	ł	ł		33.9 40.8 48.1	
		F	1	50.1 62.9 74.1	
	F I			28.2 32.9 38.0	
	F	ł		33.3 37.6 42.1	
	F 1			26.7 29.3 32.0	
	F A	1		33.2 35.7 38.3	
		F I		42.7 47.8 52.9	
		F 1		39.3 43.1 46.9	
	F 4			30.1 32.5 34.9	
	-			38.3 44.5 50.8	
	1	1	1		
10	30	50	70		
% incidence rate					
	F 10			⁴ ⁴ ⁴ ⁴ ⁴ ⁴ ⁴ ⁴ ⁴ ⁴	





Stressed about buying food past 12 months Rappahannock/Rapidan and Rappahannock HDs

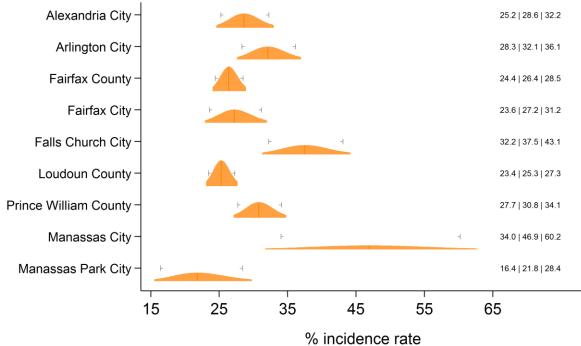


Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB Gray markers: 90% confidence interval





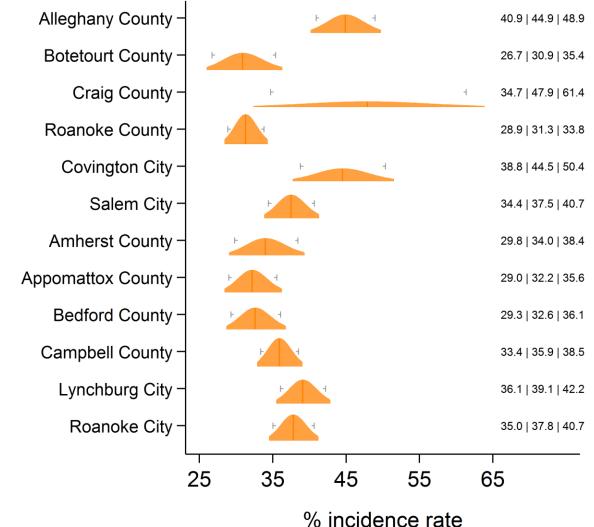
Stressed about buying food past 12 months Alexandria, Fairfax, Arlington, Loudon, Prince William HDs





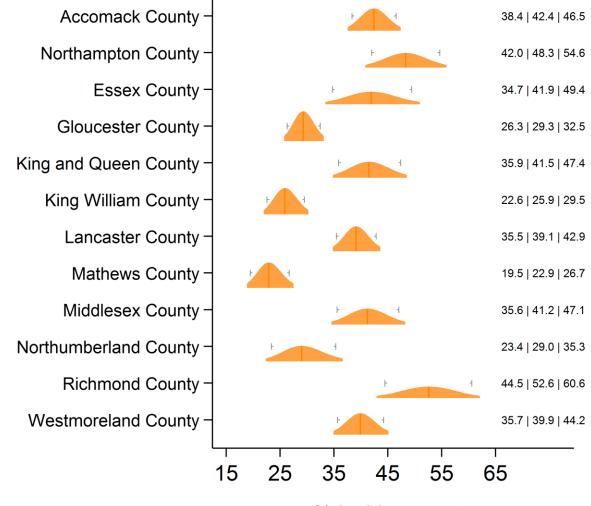


Stressed about buying food past 12 months Alleghany, Roanoke and Central Virginia HDs

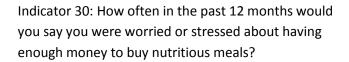




Stressed about buying food past 12 months Eastern Shore and Three Rivers HDs



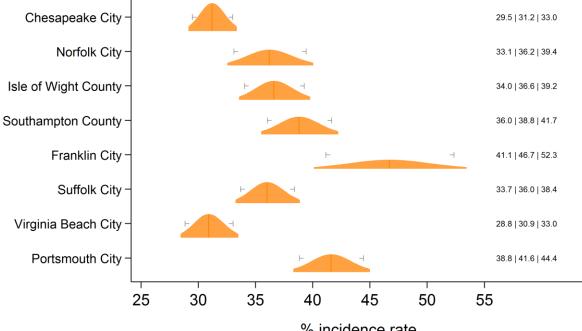
% incidence rate







Stressed about buying food past 12 months Norfolk,Portsmouth,Chesapeake,VA Beach,W. Tidewater HDs

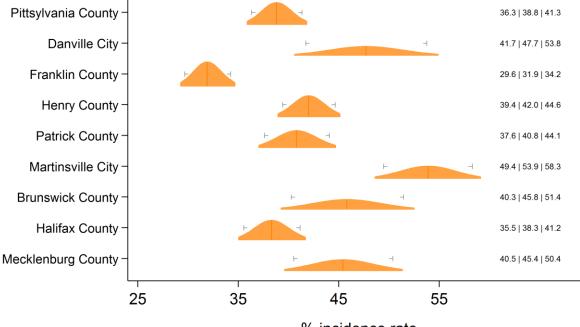


Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB Gray markers: 90% confidence interval





Stressed about buying food past 12 months Pittsylvania/Danville, Southside and West Piedmont HDs

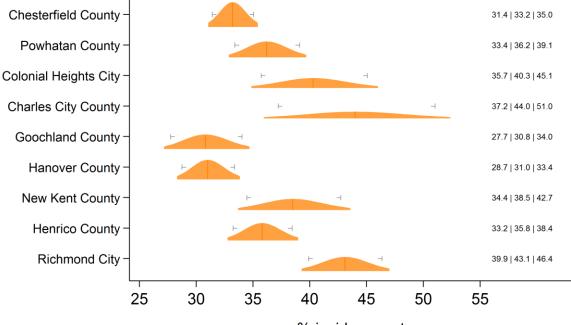


Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB Gray markers: 90% confidence interval





Stressed about buying food past 12 months Chesterfield, Chickahominy, Henrico and Richmond HDs

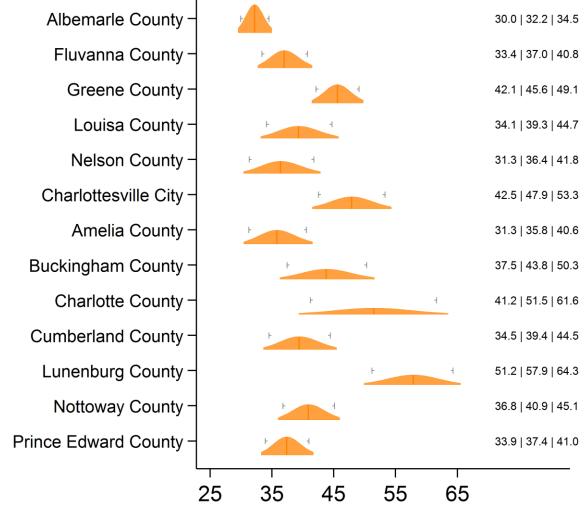


Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB Gray markers: 90% confidence interval





Stressed about buying food past 12 months Thomas Jefferson and Piedmont HDs

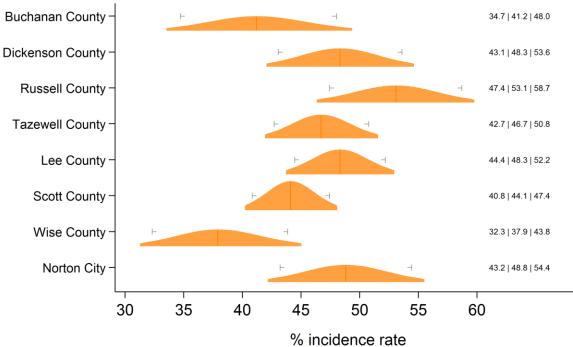


% incidence rate





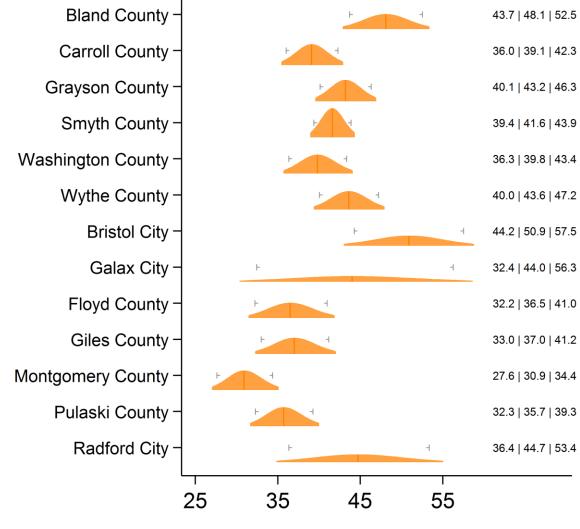
Stressed about buying food past 12 months Cumberland Plateau and Lenowisco HDs







Stressed about buying food past 12 months New River and Mount Rogers HDs

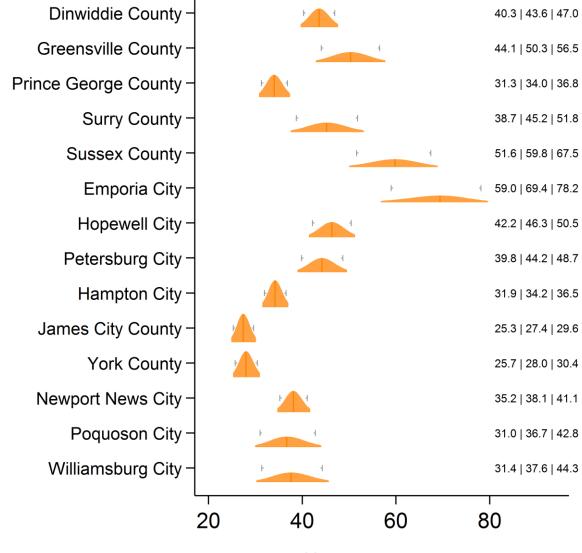


% incidence rate





Stressed about buying food past 12 months Crater, Peninsula and Hampton HDs



% incidence rate





Section 5: Additional diagnostics

Direct estimate is inside the 95% SAE Wilson CI: 50 areas.

Direct estimate is outside the 95% SAE Wilson CI: 83 areas.

SAE estimate is inside the 95% direct Wilson CI: 130 areas.

SAE estimate is outside the 95% direct Wilson CI: 3 areas.

SAE Wilson 95% CI is fully inside the 95% direct Wilson CI: 119 areas.

SAE Wilson 95% CI partially overlaps with the 95% direct Wilson CI: 14 areas.

SAE Wilson 95% CI and the 95% direct Wilson CI do not overlap: 0 areas.

SAE standard error is less that the direct standard error: 129 areas.

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

Direct standard error is zero: 4 areas.

Proportion of SAE variance due to ACS sampling error: min = 0.37%; med = 8.20%; max = 30.44%.

Proportion of SAE variance to sampling error in regression coefficient estimates: min = 69.56%; med = 91.80%; max = 99.63%.

Proportion of SAE variance due to model selection: min = 0.00%; med = 0.00%; max = 0.00%.