



## Indicator 31: At Least 1 Fall in the Past Year- Ages 45+

Internal variable name: outc31\_falls

### Section 1: Definition

Definition: % at least one event reported: In the past 12 months, how many times have you fallen?

### Section 2: Predictive models

	Mixed, demos only	Logit, no area effects	Mixed with area covariates
	b/se	b/se	b/se
Outcome 31: At Least 1 Fall in the Past Year- Ages 45+			
Non-Hispanic Black vs. Non-Hispanic White	-0.3929*** (0.0860)	-0.3911*** (0.1129)	-0.3912*** (0.0857)
Non-Hispanic Asian vs. Non-Hispanic White	-0.2912 (0.2956)	-0.1180 (0.3761)	-0.1180 (0.3078)
Non-Hispanic Other vs. Non-Hispanic White	0.2249 (0.1768)	0.2115 (0.1934)	0.2115 (0.1780)
Hispanic vs. Non-Hispanic White	-0.1367 (0.2665)	-0.0704 (0.2784)	-0.0704 (0.2651)
Female	0.3398*** (0.0788)	0.3430*** (0.0769)	0.3430*** (0.0779)
Age 45-54 vs. 65+	-0.1661 (0.1108)	-0.1150 (0.0937)	-0.1150 (0.1117)
Age 55-64 vs. 65+	-0.0865 (0.1058)	-0.0573 (0.0871)	-0.0573 (0.1046)
% education Bachelor+, population 25+ years old		0.0117 (0.0074)	0.0117 (0.0065)
Melanoma Cancer Female Rate		-0.0114** (0.0039)	-0.0114*** (0.0033)
% veterans		-0.0244* (0.0113)	-0.0244** (0.0087)
Uterus Cancer Female Rate		0.0064 (0.0037)	0.0064* (0.0027)
Diabetes Type II hospitalization rate per 1,000		-0.1121* (0.0479)	-0.1121** (0.0417)
Melanoma Cancer Male Rate		0.0302*** (0.0061)	0.0302*** (0.0060)
{% education Bachelor+, population 25+ years old} interacted with {Melanoma Cancer Male Rate}		-0.0011*** (0.0003)	-0.0011*** (0.0002)



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% speaking English less than very well		-0.0567 (0.0293)	-0.0567* (0.0286)
{% speaking English less than very well} interacted with {Melanoma Cancer Male Rate}		0.0016 (0.0011)	0.0016 (0.0012)
Intercept	-1.2176*** (0.0789)	-0.9003*** (0.2653)	-0.9003*** (0.2232)
Area effect variance	0.0000* (0.0000)		0.0000*** (0.0000)

Number of alternative models used to estimate model error = 2.



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**Section 3: Results**

County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Augusta County	51015	26.6%	(17.7%, 37.9%)	28.9%	(25.6%, 32.5%)
Bath County	51017	12.3%	(2.2%, 58.0%)	25.5%	(21.9%, 29.6%)
Caroline County	51033	25.6%	(10.0%, 51.5%)	23.9%	(21.5%, 26.5%)
Clarke County	51043	14.6%	(3.6%, 43.6%)	24.4%	(21.2%, 28.0%)
Culpeper County	51047	36.6%	(22.3%, 53.8%)	28.4%	(26.1%, 30.8%)
Fauquier County	51061	27.8%	(17.5%, 41.1%)	27.3%	(23.9%, 31.0%)
Frederick County	51069	17.1%	(10.5%, 27.9%)	25.8%	(23.5%, 28.3%)
Highland County	51091	0.0%	(0.0%, 87.8%)	21.1%	(16.9%, 25.9%)
King George County	51099	18.3%	(5.9%, 55.0%)	20.7%	(17.2%, 24.8%)
Madison County	51113	15.3%	(5.1%, 37.6%)	28.3%	(24.9%, 32.0%)
Orange County	51137	17.4%	(8.4%, 32.7%)	23.7%	(20.9%, 26.8%)
Page County	51139	34.5%	(11.0%, 69.1%)	32.2%	(29.0%, 35.7%)
Rappahannock County	51157	59.8%	(23.1%, 88.1%)	23.9%	(17.4%, 31.8%)
Rockbridge County	51163	38.0%	(19.9%, 60.1%)	25.4%	(22.5%, 28.6%)
Rockingham County	51165	24.0%	(14.7%, 36.7%)	30.1%	(27.1%, 33.2%)
Shenandoah County	51171	24.4%	(12.2%, 42.9%)	28.8%	(26.0%, 31.8%)
Spotsylvania County	51177	33.1%	(20.3%, 48.9%)	24.2%	(21.5%, 27.2%)
Stafford County	51179	17.2%	(10.0%, 28.1%)	20.6%	(17.6%, 23.9%)
Warren County	51187	13.7%	(6.8%, 33.7%)	25.4%	(22.4%, 28.7%)
Buena Vista City	51530	0.0%	(0.0%, 99.4%)	21.0%	(13.9%, 30.5%)
Fredericksburg City	51630	12.4%	(4.9%, 42.6%)	20.3%	(16.5%, 24.7%)
Harrisonburg City	51660	0.0%	(0.0%, 57.3%)	31.3%	(13.1%, 58.0%)
Lexington City	51678	0.0%	(0.0%, 99.4%)	0.2%	(0.0%, 1.4%)
Staunton City	51790	12.0%	(2.2%, 58.7%)	20.9%	(14.5%, 29.2%)
Waynesboro City	51820	20.5%	(3.8%, 62.7%)	32.3%	(28.9%, 36.0%)
Winchester City	51840	44.1%	(16.0%, 76.6%)	18.7%	(9.7%, 33.0%)

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County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Albemarle County	51003	19.7%	(12.4%, 30.0%)	18.4%	(15.7%, 21.4%)
Alleghany County	51005	20.6%	(10.0%, 37.6%)	25.2%	(21.6%, 29.1%)
Amherst County	51009	10.1%	(5.0%, 32.4%)	21.4%	(18.1%, 25.2%)
Appomattox County	51011	30.3%	(13.0%, 55.8%)	36.0%	(30.2%, 42.3%)
Arlington City	51013	26.9%	(18.3%, 37.7%)	22.1%	(18.0%, 26.8%)
Bedford County	51019	21.0%	(12.4%, 33.4%)	27.4%	(24.9%, 30.1%)
Botetourt County	51023	17.7%	(9.2%, 33.2%)	23.4%	(20.1%, 27.0%)
Campbell County	51031	29.9%	(16.5%, 47.9%)	25.9%	(23.1%, 28.9%)
Craig County	51045	19.9%	(2.3%, 81.0%)	23.1%	(19.2%, 27.5%)
Fairfax County	51059	17.3%	(12.6%, 23.3%)	19.5%	(17.0%, 22.2%)
Fluvanna County	51065	34.2%	(15.3%, 60.0%)	28.7%	(25.8%, 31.9%)
Greene County	51079	6.3%	(1.0%, 31.1%)	17.8%	(13.9%, 22.5%)
Loudoun County	51107	23.4%	(16.4%, 32.3%)	23.5%	(20.8%, 26.5%)
Louisa County	51109	34.3%	(18.2%, 55.2%)	33.1%	(29.8%, 36.5%)
Nelson County	51125	27.9%	(11.3%, 54.0%)	23.4%	(19.8%, 27.4%)
Prince William County	51153	17.9%	(12.4%, 25.2%)	21.1%	(17.4%, 25.3%)
Roanoke County	51161	21.7%	(15.2%, 30.1%)	20.1%	(17.7%, 22.8%)
Alexandria City	51510	23.8%	(14.8%, 36.0%)	19.5%	(16.7%, 22.7%)
Charlottesville City	51540	18.3%	(4.7%, 59.2%)	15.7%	(11.1%, 21.7%)
Covington City	51580	100.0%	(0.6%, 100.0%)	93.1%	(69.8%, 98.8%)
Fairfax City	51600	20.4%	(11.1%, 34.6%)	19.0%	(16.3%, 21.9%)
Falls Church City	51610	30.3%	(5.6%, 76.2%)	14.4%	(9.4%, 21.3%)
Lynchburg City	51680	17.0%	(7.1%, 35.5%)	24.3%	(20.9%, 28.0%)
Manassas City	51683	22.8%	(4.9%, 62.8%)	22.2%	(16.0%, 29.9%)
Manassas Park City	51685	.%	(.%, .%)	16.6%	(9.4%, 27.6%)
Salem City	51775	6.3%	(1.8%, 39.4%)	14.9%	(10.8%, 20.2%)

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County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Bland County	51021	13.3%	(2.3%, 63.2%)	28.4%	(24.4%, 32.9%)
Buchanan County	51027	27.1%	(14.2%, 45.7%)	26.0%	(21.6%, 31.0%)
Carroll County	51035	35.7%	(20.6%, 54.2%)	32.3%	(28.3%, 36.4%)
Dickenson County	51051	38.3%	(20.3%, 60.3%)	34.6%	(28.9%, 40.8%)
Floyd County	51063	14.5%	(5.5%, 33.0%)	32.6%	(27.6%, 38.0%)
Franklin County	51067	33.9%	(19.3%, 52.3%)	27.7%	(25.1%, 30.4%)
Giles County	51071	21.0%	(7.4%, 46.8%)	34.4%	(30.8%, 38.3%)
Grayson County	51077	27.8%	(10.1%, 56.7%)	27.0%	(22.9%, 31.5%)
Henry County	51089	20.7%	(12.3%, 32.7%)	23.9%	(20.5%, 27.7%)
Lee County	51105	40.9%	(17.4%, 69.4%)	27.4%	(24.1%, 31.0%)
Montgomery County	51121	22.9%	(14.3%, 34.4%)	31.2%	(26.6%, 36.1%)
Patrick County	51141	23.1%	(9.8%, 45.2%)	25.1%	(21.5%, 29.1%)
Pittsylvania County	51143	17.1%	(11.0%, 25.5%)	25.0%	(22.4%, 27.8%)
Pulaski County	51155	34.0%	(20.2%, 51.3%)	32.2%	(28.4%, 36.3%)
Russell County	51167	42.2%	(24.5%, 62.1%)	31.1%	(27.5%, 34.9%)
Scott County	51169	34.6%	(20.7%, 51.8%)	33.0%	(27.5%, 39.0%)
Smyth County	51173	45.5%	(24.0%, 68.8%)	31.4%	(28.1%, 34.8%)
Tazewell County	51185	33.3%	(20.5%, 49.1%)	34.6%	(30.7%, 38.6%)
Washington County	51191	20.4%	(10.9%, 34.9%)	26.7%	(23.4%, 30.2%)
Wise County	51195	29.9%	(19.0%, 43.7%)	31.3%	(28.4%, 34.4%)
Wythe County	51197	40.8%	(24.2%, 59.8%)	35.6%	(31.2%, 40.4%)
Bristol City	51520	52.2%	(15.8%, 86.4%)	39.6%	(33.5%, 46.1%)
Danville City	51590	16.0%	(5.4%, 38.7%)	19.2%	(15.4%, 23.5%)
Galax City	51640	0.0%	(0.0%, 90.8%)	12.0%	(6.3%, 21.5%)
Martinsville City	51690	0.0%	(0.0%, 76.4%)	17.7%	(13.2%, 23.2%)
Norton City	51720	24.4%	(2.1%, 87.4%)	20.4%	(15.5%, 26.3%)
Radford City	51750	0.0%	(0.0%, 91.4%)	29.9%	(25.1%, 35.2%)
Roanoke City	51770	30.5%	(21.1%, 41.9%)	25.6%	(21.9%, 29.7%)

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County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Amelia County	51007	28.1%	(8.6%, 61.7%)	32.4%	(28.2%, 36.8%)
Brunswick County	51025	11.3%	(5.1%, 33.5%)	24.3%	(20.2%, 28.9%)
Buckingham County	51029	22.2%	(9.7%, 43.1%)	27.7%	(24.2%, 31.4%)
Charles City County	51036	38.6%	(13.3%, 72.2%)	23.4%	(19.9%, 27.3%)
Charlotte County	51037	29.3%	(9.2%, 62.9%)	26.7%	(23.8%, 29.8%)
Chesterfield County	51041	26.3%	(19.9%, 33.9%)	22.7%	(20.2%, 25.5%)
Cumberland County	51049	18.1%	(5.1%, 47.4%)	30.2%	(26.8%, 33.9%)
Dinwiddie County	51053	24.9%	(12.9%, 42.7%)	23.8%	(21.0%, 26.8%)
Goochland County	51075	24.0%	(10.4%, 46.2%)	26.0%	(21.9%, 30.6%)
Greensville County	51081	19.8%	(4.7%, 55.5%)	23.8%	(20.2%, 27.8%)
Halifax County	51083	25.8%	(14.4%, 41.9%)	27.5%	(24.4%, 30.9%)
Hanover County	51085	20.6%	(12.7%, 31.5%)	25.2%	(22.8%, 27.8%)
Henrico County	51087	22.1%	(16.6%, 28.9%)	20.9%	(18.8%, 23.2%)
Lunenburg County	51111	41.3%	(12.9%, 76.9%)	20.5%	(16.8%, 24.7%)
Mecklenburg County	51117	18.2%	(10.2%, 30.3%)	20.5%	(17.4%, 23.9%)
New Kent County	51127	29.9%	(11.8%, 57.6%)	30.4%	(26.9%, 34.1%)
Nottoway County	51135	9.9%	(3.4%, 29.5%)	21.1%	(17.5%, 25.2%)
Powhatan County	51145	50.2%	(17.0%, 83.2%)	28.6%	(25.4%, 31.9%)
Prince Edward County	51147	35.9%	(16.4%, 61.6%)	27.7%	(24.4%, 31.2%)
Prince George County	51149	25.9%	(14.0%, 43.0%)	25.2%	(22.1%, 28.7%)
Surry County	51181	47.0%	(10.3%, 87.3%)	21.5%	(18.2%, 25.2%)
Sussex County	51183	33.4%	(13.6%, 61.4%)	28.6%	(24.5%, 33.0%)
Colonial Heights City	51570	80.2%	(27.6%, 97.7%)	32.3%	(24.4%, 41.4%)
Emporia City	51595	19.2%	(1.9%, 86.1%)	22.4%	(17.7%, 27.9%)
Hopewell City	51670	8.9%	(4.5%, 33.2%)	33.0%	(26.6%, 40.0%)
Petersburg City	51730	18.8%	(8.6%, 36.4%)	22.4%	(16.8%, 29.2%)
Richmond City	51760	20.0%	(13.2%, 29.0%)	22.6%	(19.8%, 25.6%)

Indicator 31: At Least 1 Fall in the Past Year- Ages

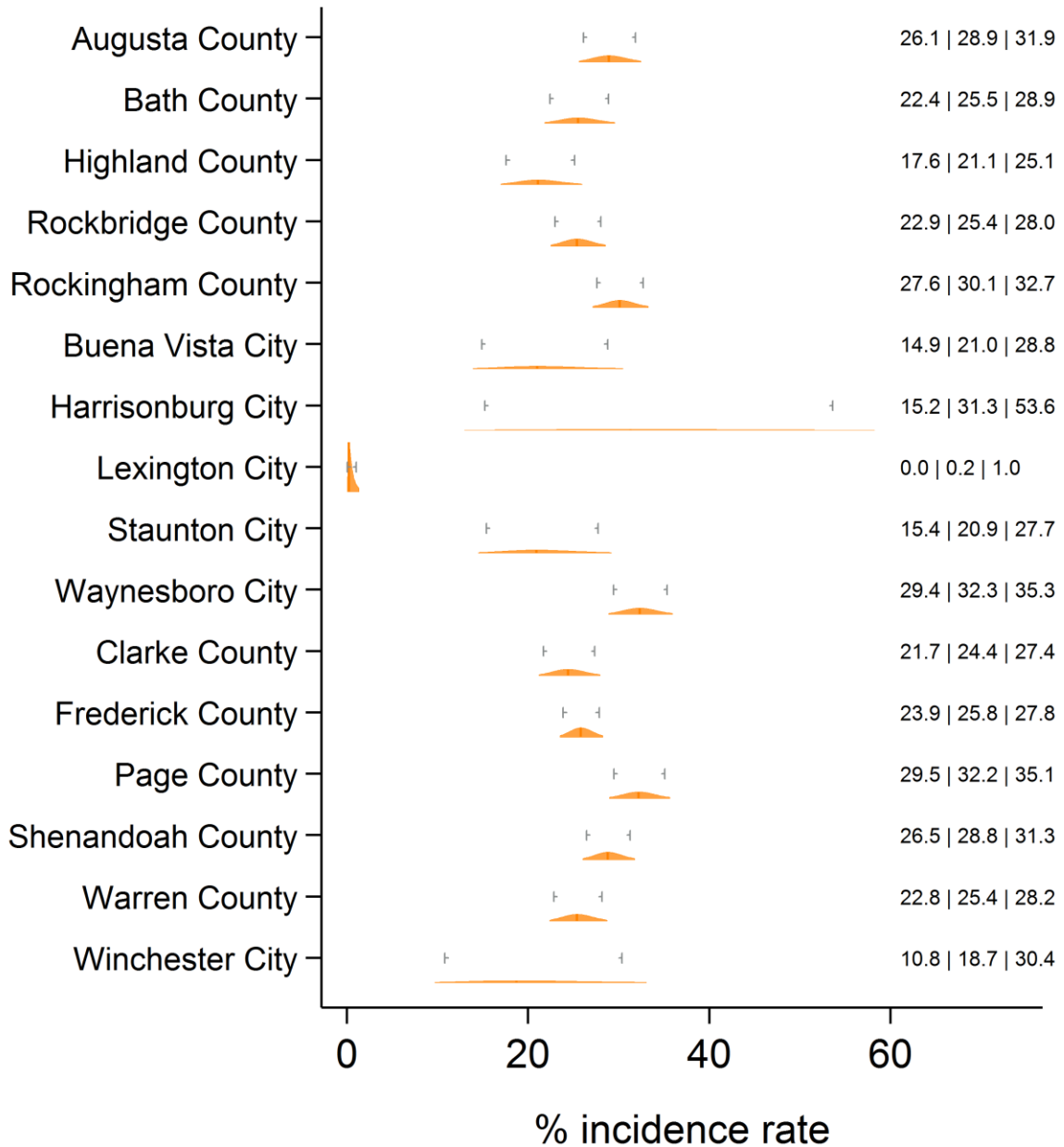
45+



County name	County FIPS	Direct estimate	Direct 95% CI	SAE composite	SAE 95% CI
Accomack County	51001	36.0%	(22.0%, 52.9%)	38.7%	(27.7%, 51.0%)
Essex County	51057	62.3%	(33.9%, 84.1%)	42.6%	(33.2%, 52.7%)
Gloucester County	51073	19.1%	(7.5%, 40.6%)	25.9%	(22.9%, 29.2%)
Isle of Wight County	51093	32.9%	(18.7%, 51.1%)	22.6%	(20.1%, 25.3%)
James City County	51095	9.3%	(5.7%, 20.5%)	12.2%	(9.2%, 16.1%)
King and Queen County	51097	62.0%	(11.7%, 95.3%)	45.0%	(36.3%, 53.9%)
King William County	51101	24.0%	(7.4%, 55.5%)	34.3%	(28.5%, 40.6%)
Lancaster County	51103	30.0%	(7.9%, 68.0%)	28.5%	(20.5%, 38.0%)
Mathews County	51115	24.8%	(8.9%, 52.5%)	23.6%	(19.3%, 28.5%)
Middlesex County	51119	7.0%	(1.7%, 72.5%)	19.1%	(14.6%, 24.5%)
Northampton County	51131	28.0%	(12.5%, 51.5%)	14.9%	(10.7%, 20.2%)
Northumberland County	51133	42.5%	(19.2%, 69.8%)	37.9%	(30.1%, 46.4%)
Richmond County	51159	38.3%	(19.5%, 61.5%)	29.9%	(23.1%, 37.6%)
Southampton County	51175	48.8%	(20.3%, 78.1%)	33.4%	(28.0%, 39.2%)
Westmoreland County	51193	28.4%	(10.1%, 58.3%)	20.6%	(17.6%, 23.9%)
York County	51199	12.6%	(6.0%, 24.3%)	20.2%	(16.6%, 24.3%)
Chesapeake City	51550	24.5%	(18.0%, 32.5%)	20.4%	(18.1%, 22.9%)
Franklin City	51620	16.9%	(8.6%, 37.4%)	32.2%	(25.3%, 40.0%)
Hampton City	51650	23.3%	(15.8%, 33.1%)	21.7%	(19.0%, 24.6%)
Newport News City	51700	18.1%	(10.4%, 29.6%)	21.6%	(18.9%, 24.6%)
Norfolk City	51710	22.3%	(15.5%, 30.9%)	22.0%	(19.7%, 24.4%)
Poquoson City	51735	8.5%	(2.0%, 66.3%)	13.8%	(9.6%, 19.3%)
Portsmouth City	51740	25.7%	(16.0%, 38.7%)	23.6%	(20.9%, 26.5%)
Suffolk City	51800	20.9%	(12.3%, 33.2%)	24.4%	(21.7%, 27.3%)
Virginia Beach City	51810	21.3%	(15.5%, 28.6%)	19.3%	(16.1%, 22.9%)
Williamsburg City	51830	20.5%	(2.4%, 72.6%)	24.2%	(16.5%, 34.2%)

Section 4: Graphical representation

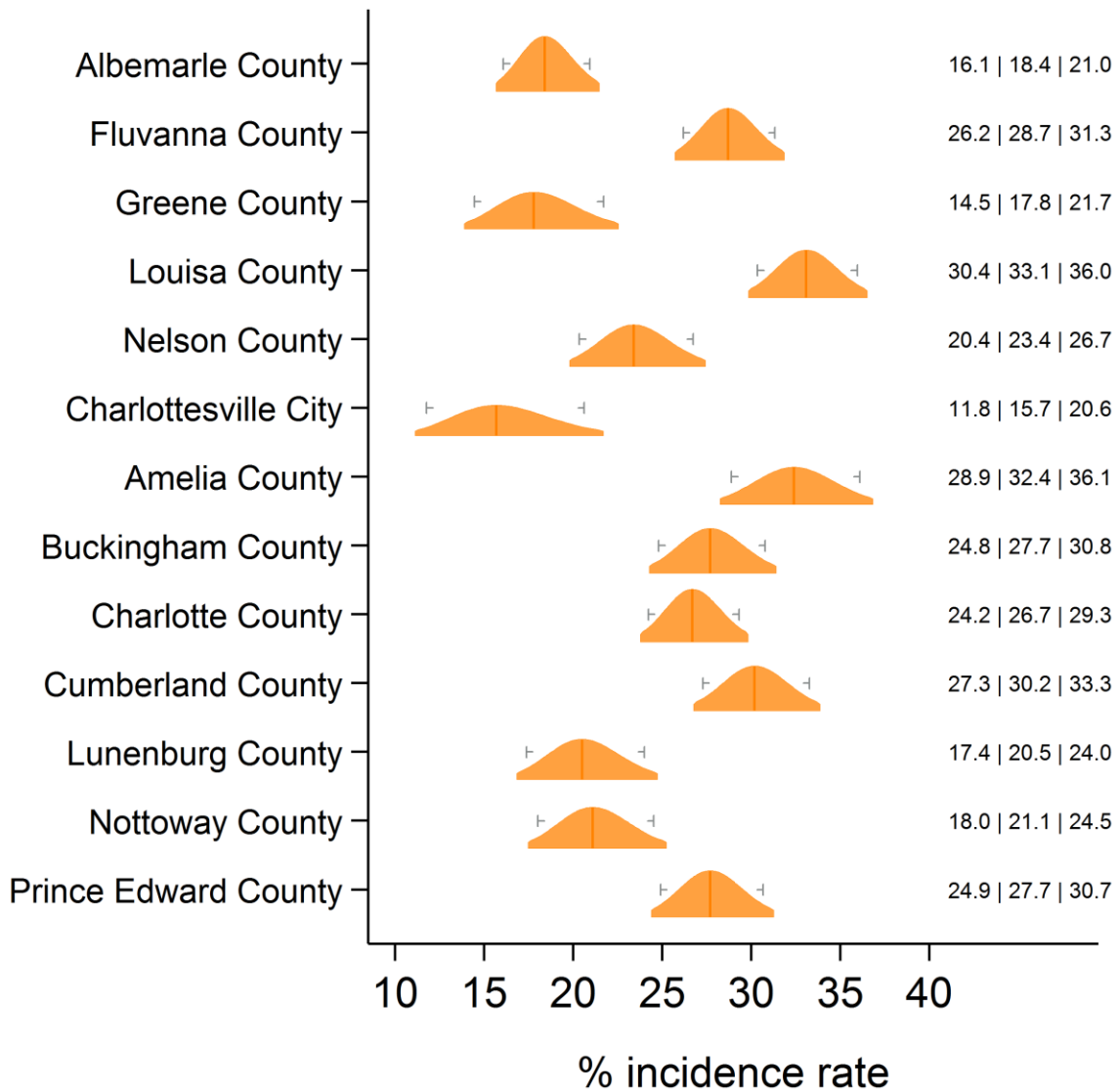
## 1+ falls in the past 12 months Central Shenandoah and Lord Fairfax HDs



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

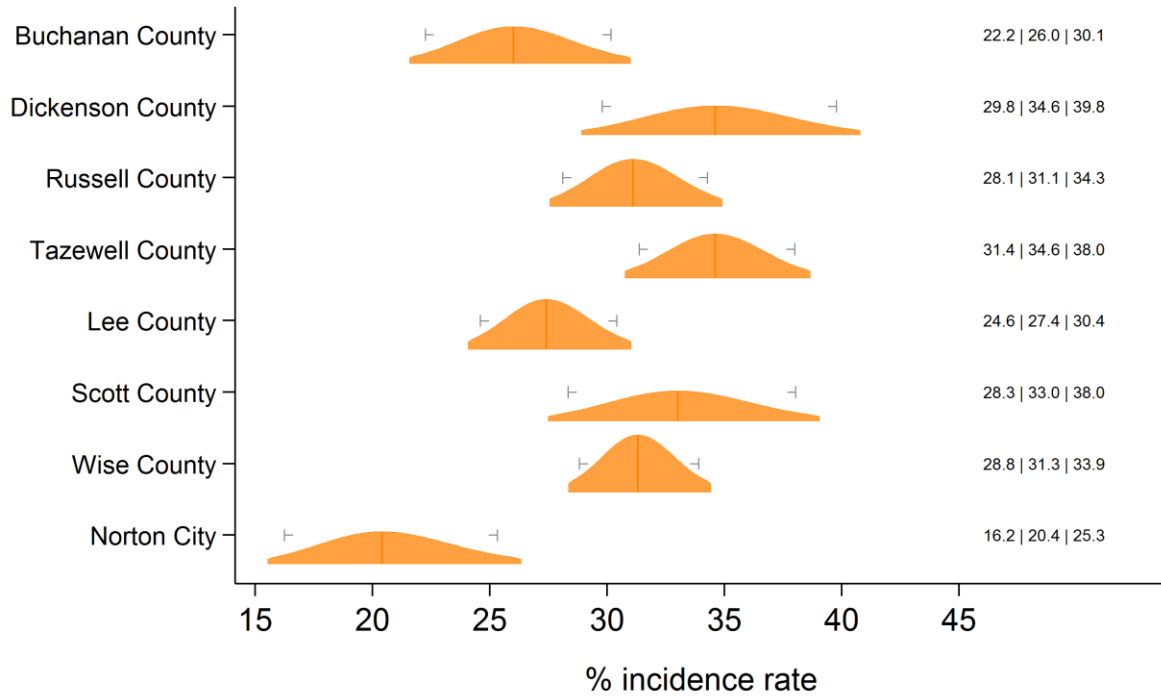


## 1+ falls in the past 12 months Thomas Jefferson and Piedmont HDs



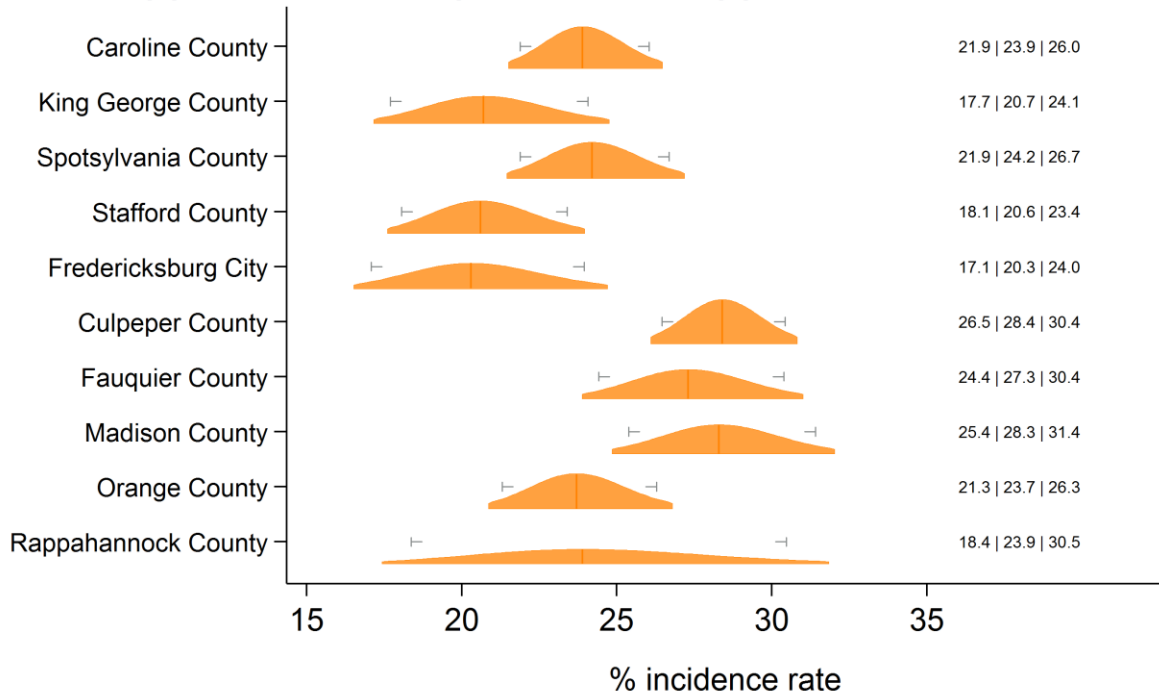
Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB  
Gray markers: 90% confidence interval

### 1+ falls in the past 12 months Cumberland Plateau and Lenowisco HDs



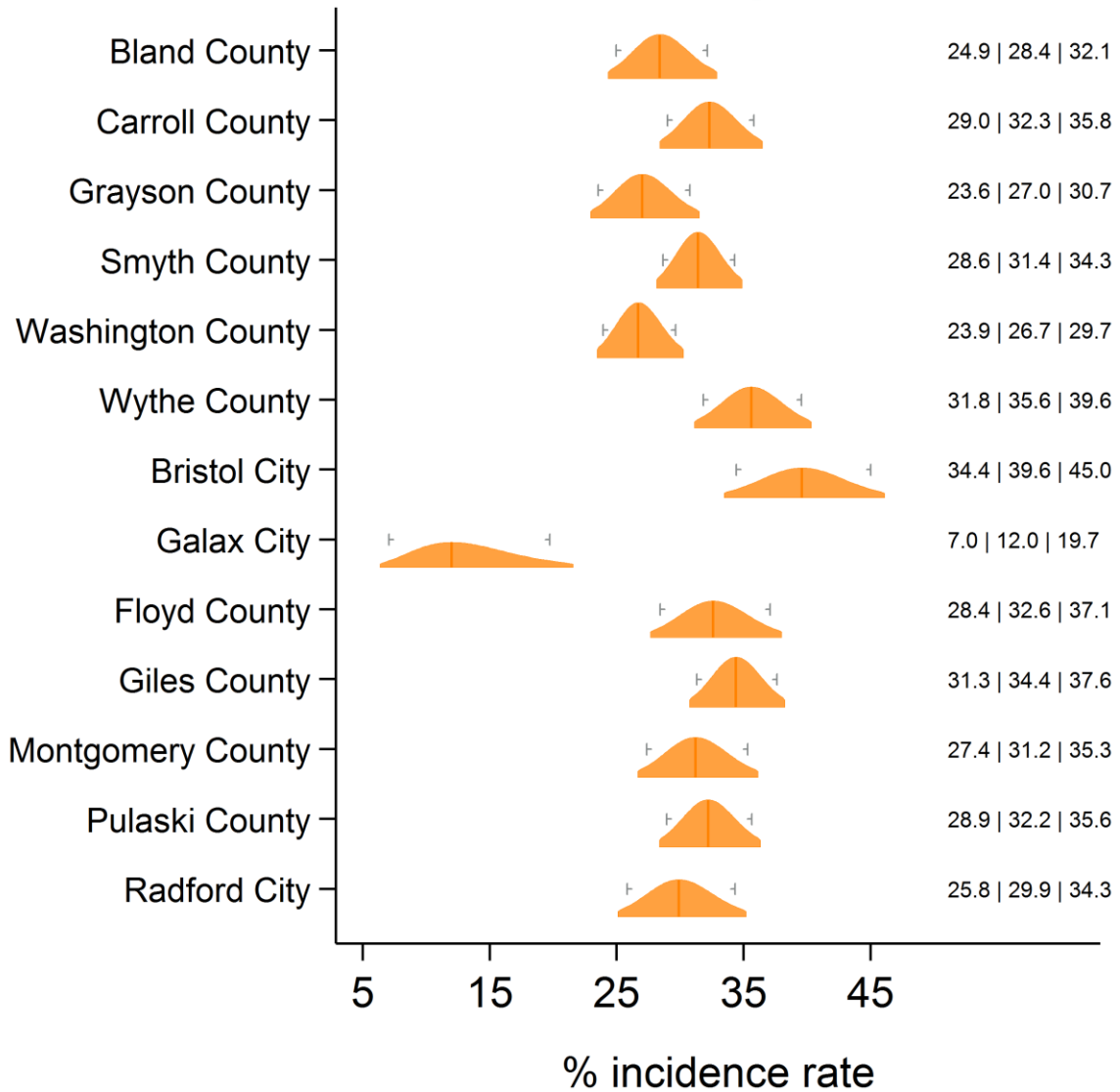
Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB  
 Gray markers: 90% confidence interval

## 1+ falls in the past 12 months Rappahannock/Rapidan and Rappahannock HDs



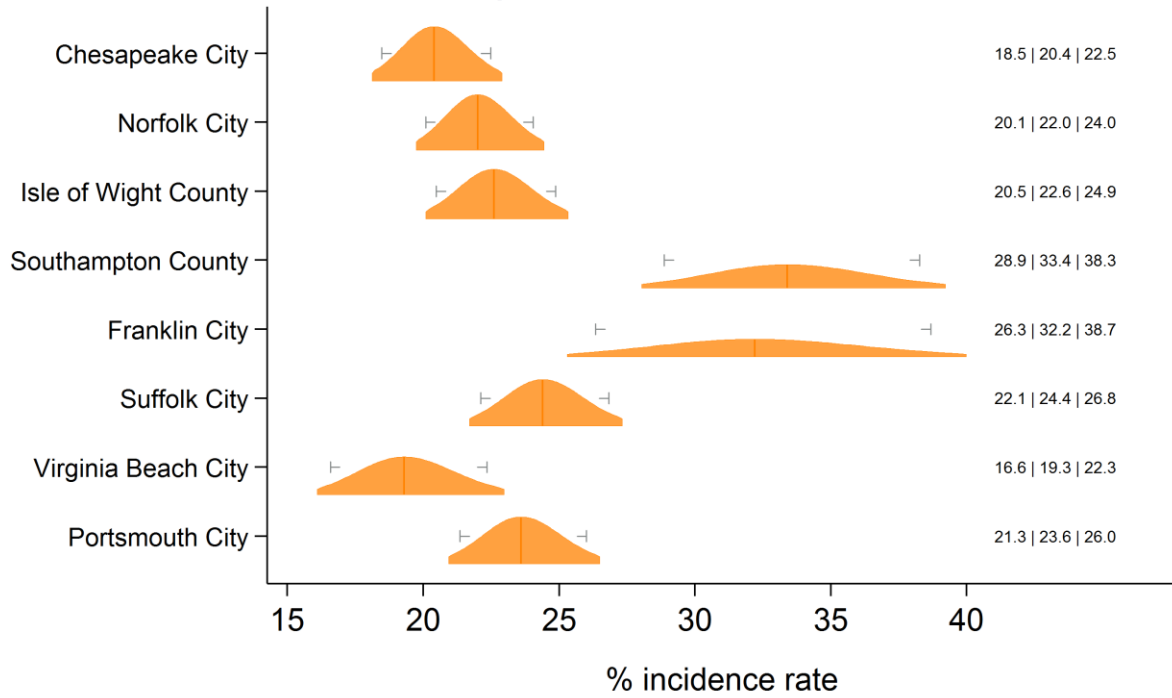
Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB  
 Gray markers: 90% confidence interval

## 1+ falls in the past 12 months New River and Mount Rogers HDs



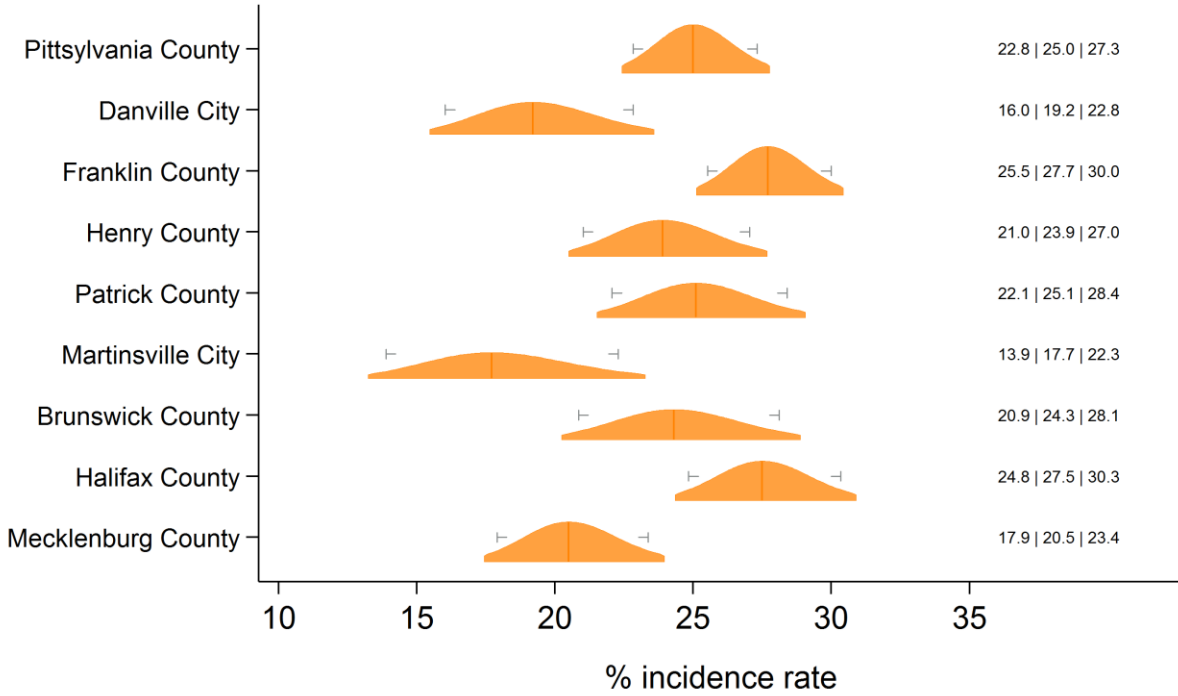
Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB  
 Gray markers: 90% confidence interval

### 1+ falls in the past 12 months Norfolk, Portsmouth, Chesapeake, VA Beach, W. Tidewater HDs



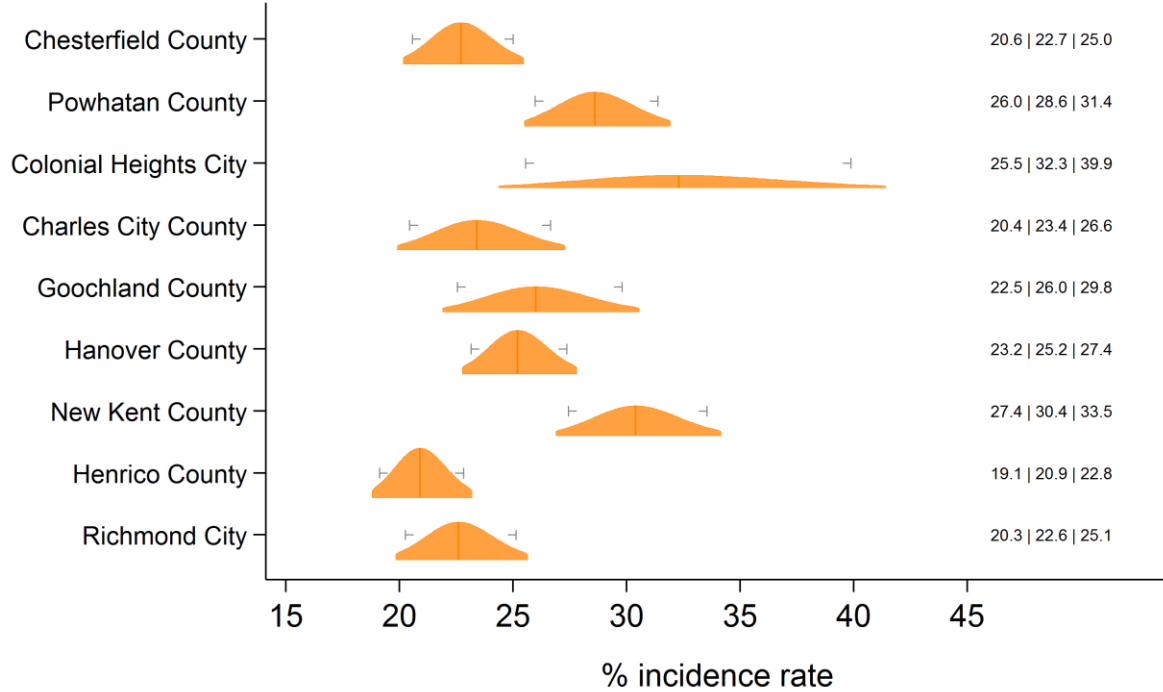
Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB  
 Gray markers: 90% confidence interval

### 1+ falls in the past 12 months Pittsylvania/Danville, Southside and West Piedmont HDs



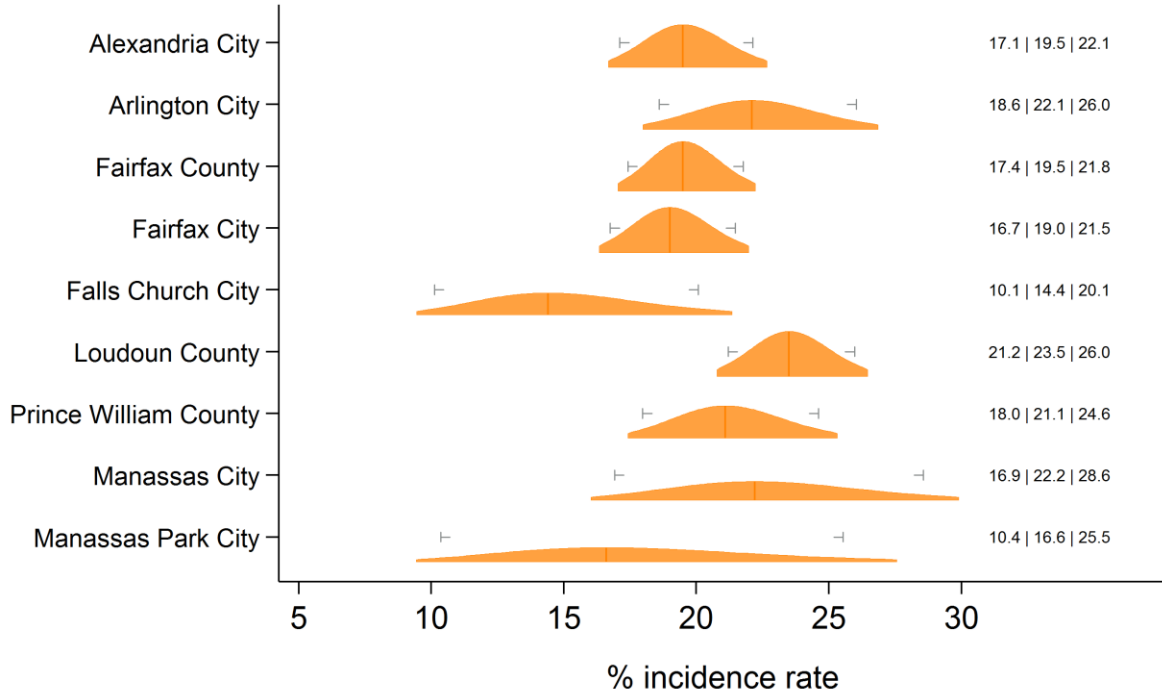
Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB  
 Gray markers: 90% confidence interval

### 1+ falls in the 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

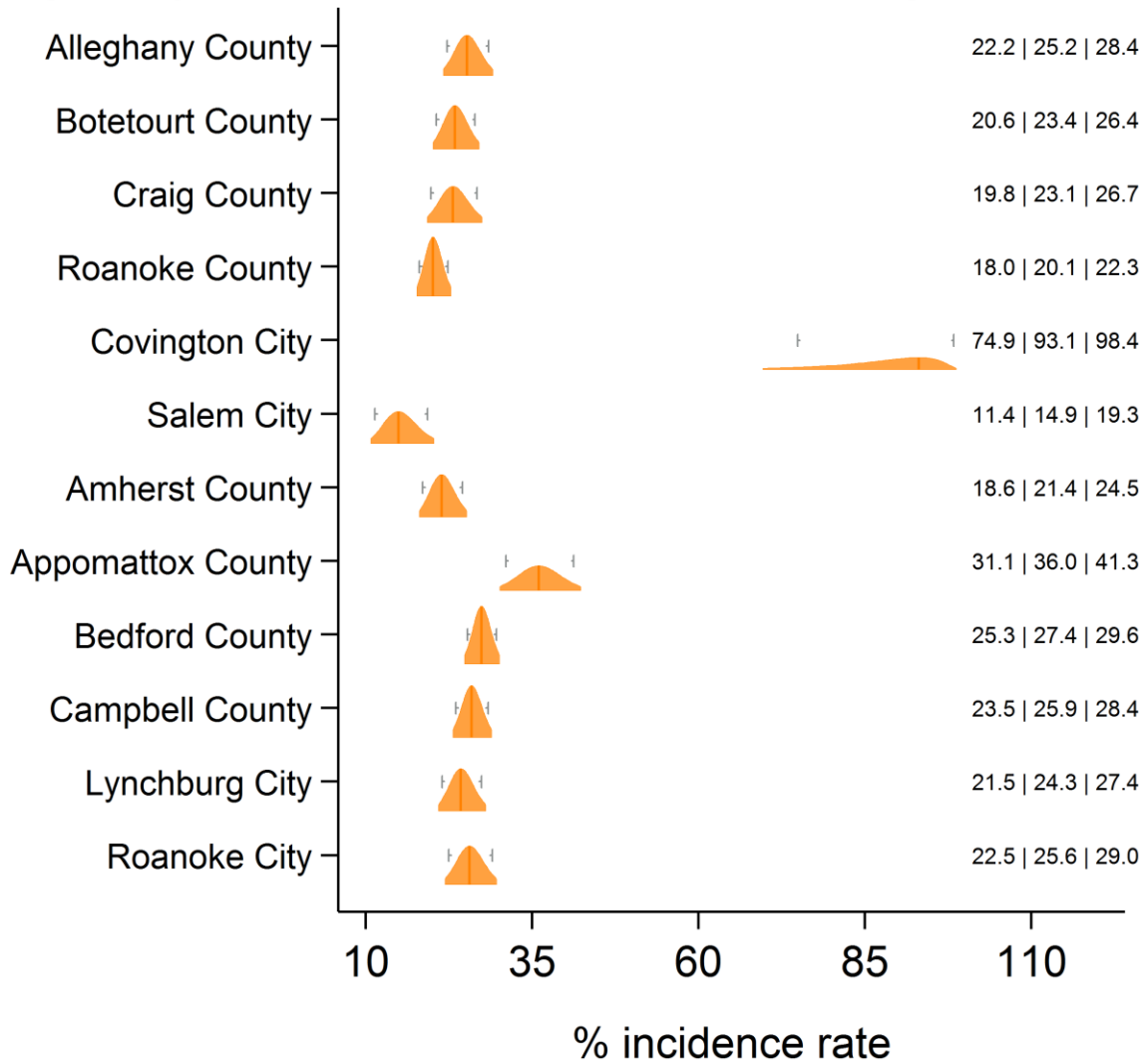
### 1+ falls in the past 12 months Alexandria, Fairfax, Arlington, Loudoun, Prince William HDs



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

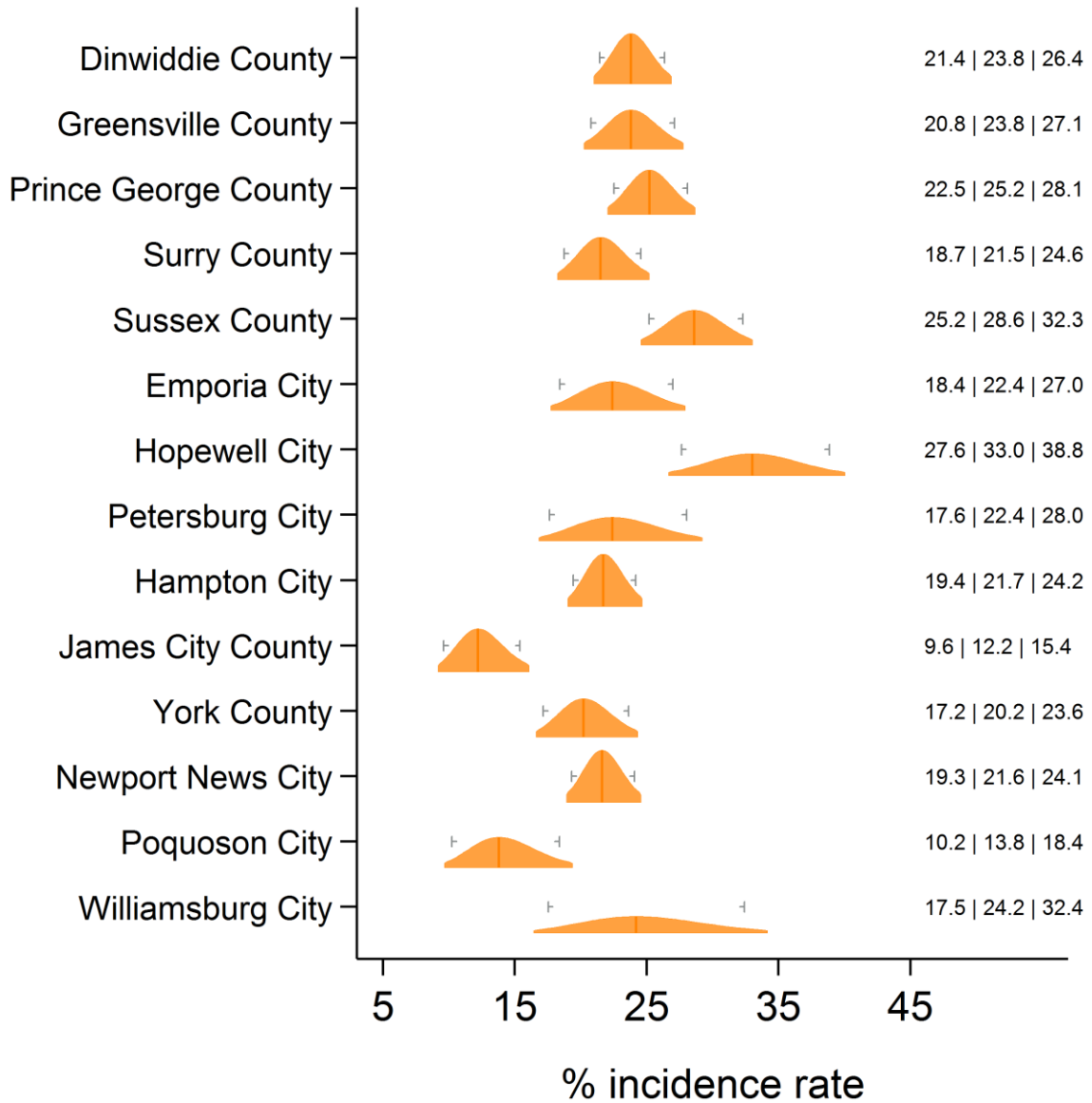


## 1+ falls in the past 12 months Alleghany, Roanoke and Central Virginia HDs



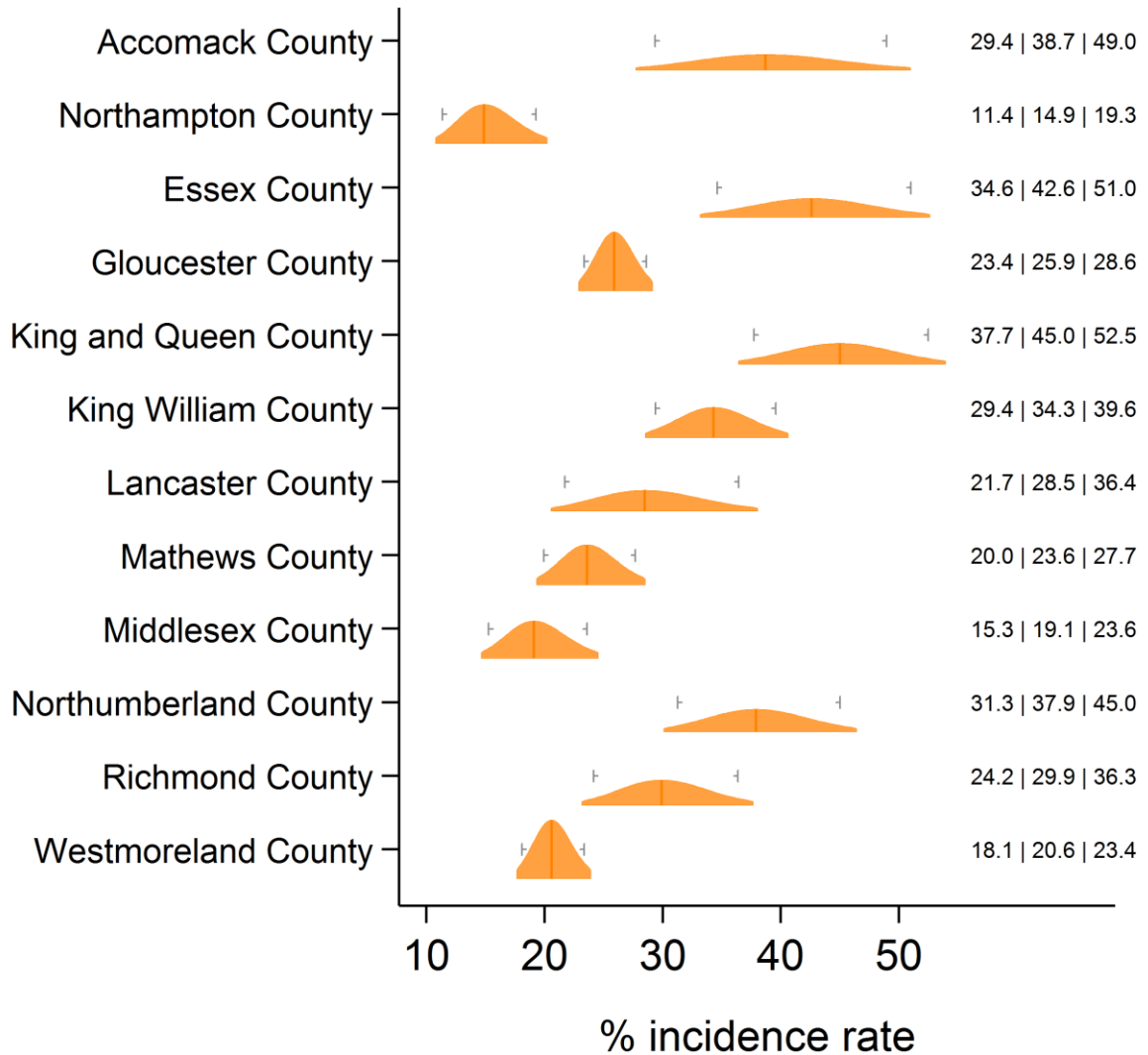
Text at right: 1-sided 95% LCB | Point Estimate | 1-sided 95% UCB  
 Gray markers: 90% confidence interval

## 1+ falls in the 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

## 1+ falls in the past 12 months 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: 49 areas.

Direct estimate is outside the 95% SAE Wilson CI: 84 areas.

SAE estimate is inside the 95% direct Wilson CI: 133 areas.

SAE estimate is outside the 95% direct Wilson CI: 0 areas.

SAE Wilson 95% CI is fully inside the 95% direct Wilson CI: 117 areas.

SAE Wilson 95% CI partially overlaps with the 95% direct Wilson CI: 16 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: 124 areas.

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

Direct standard error is zero: 9 areas.

Proportion of SAE variance due to ACS sampling error: min = 0.01%; med = 3.59%; max = 15.19%.

Proportion of SAE variance to sampling error in regression coefficient estimates: min = 9.62%; med = 94.83%; max = 99.78%.

Proportion of SAE variance due to model selection: min = 0.02%; med = 0.83%; max = 89.52%.