

Using Confidence Intervals when Comparing Population-Based Rates

Town of "Springfield"

Too small a jurisdiction for stable yearly rates

	population	deaths	rate	Confidence Interval	
				lower limit	upper limit
Year 1	50,000	9	18.00	6.24	29.76
Year 2	50,000	4	8.00	0.16	15.84
Year 3	50,000	10	20.00	7.60	32.40
Year 4	50,000	4	8.00	0.16	15.84
Year 5	50,000	6	12.00	2.40	21.60
Five-year total	250,000	33	13.20	8.70	17.70
State	1,300,000	150	11.54	9.69	13.38

Confidence Interval for Population-Based Rate

Lower Limit= $(100,000/\text{population}) (\text{cases} - (1.96 \times \text{square root of cases}))$

Upper Limit= $(100,000/\text{population}) (\text{cases} + (1.96 \times \text{square root of cases}))$