Cuyahoga County Flu Activity Level Indicator

The scale uses four levels – "Low", "Moderate", "High", and "Very High" - to measure flu activity within Cuyahoga County. These levels are consistent with how the Centers for Disease Control and Prevention (CDC) classifies flu severity each season in the United States.
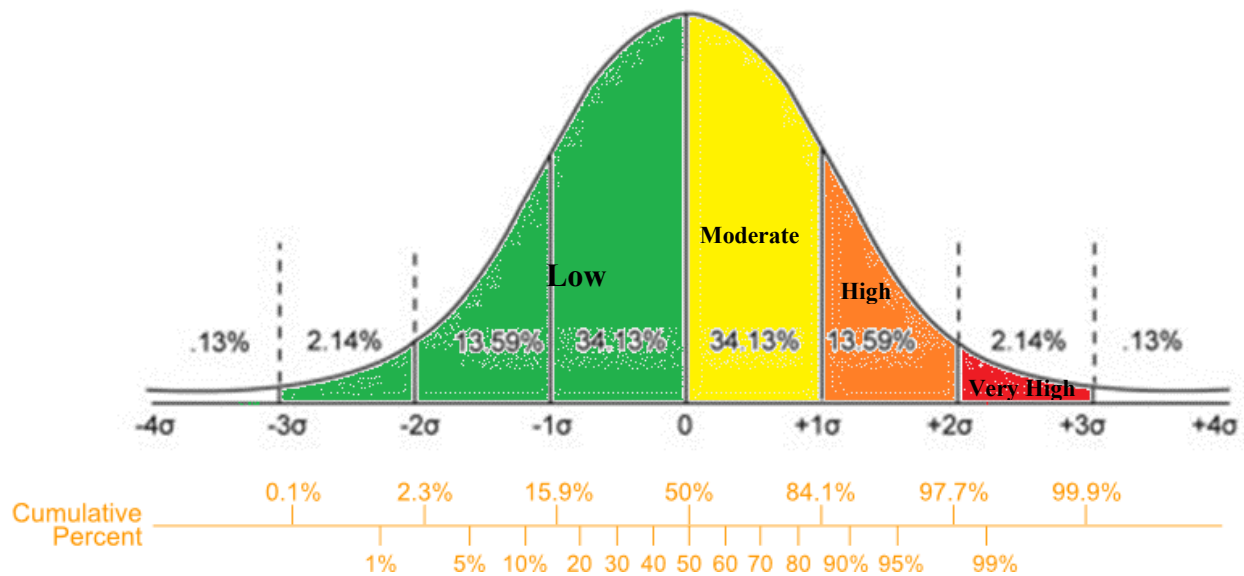
Each week 3 indicators found in the weekly flu surveillance report will be compared to their respective baseline data. Each of the 3 indicators will be assigned an activity level in lieu of an overall flu activity level.

The 3 indicators that will be evaluated each week are:
- Pneumonia and Influenza (P&I) related deaths
- Influenza-associated hospitalizations (IAHs)
- Influenza-like illness (ILI) visits to hospital emergency departments (EDs)

The current week's value for each indicator is evaluated to determine if it is higher or lower than the baseline data average. If it is higher than the average for the baseline data, the indicator is analyzed to see how many standard deviations it is from the mean.

The following graph shows the normal distribution with standard deviations and corresponding cumulative percent.

Each activity level is assigned a score based on the number of standard deviations it is from the mean. The score can range from 0 (lowest) to 3 (highest). Here is the standard deviation range with corresponding score and activity level:

Standard Deviation	Score	Activity Level	
$\leq 0\,\sigma$	0	Low	
$0.01\,\sigma - 1.00\,\sigma$	1	Moderate	
$1.01\,\sigma - 2.00\,\sigma$	2	High	
$> 2\,\sigma$	3	Very High	

For example, if the current week's number of Influenza-associated hospitalizations is more than two standard deviations above the baseline data mean, then the current value is higher than 97.7% of all baseline data values. This indicator would receive a score of '3' for the week and activity level of "Very High".

The established values (i.e., average and corresponding standard deviations) for the aforementioned key indicators for the 2024-25 Influenza season are as follows:

			P&I related deaths	IAHS	ILI visits to hospital EDs
		Average	6.96%	30	250
0	Low	O SD	6.96%	30	250
1	Moderate	1 SD	11.07%	82	380
2	High	2 SD	15.18%	135	511
3	Very High	>2 SD	15.19%	136	512

These values will change each year as the baseline data for each key indicator is determined by the mean of the previous 5 years data.

For questions about the methodology, please contact the Epidemiology Team at the Cuyahoga County Board of Health at epi@ccbh.net.