DOH Data Presentation for the Public – Small Numbers Standard

For estimates > 0:

Do the data come from a survey?

- **NO**: Check people in the numerator (n)
  - **n ≥ 10**: NO SUPPRESSION
  - **0 < n < 10**: SUPPRESS or AGGREGATE

- **YES**: ≥ 80% of population surveyed
  - Check Weighting
    - Equal Weights: Check people in the numerator (n)
    - Unequal Weights: NO SUPPRESSION

For estimates = 0:

Display “0” as count and estimate with confidence interval

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1. Examples include birth data, CHARS data, linked death data, notifiable conditions reports
2. Examples include Healthy Youth Survey
3. Examples include Behavioral Risk Factor Surveillance System, Pregnancy Risk Assessment System
4. Exceptions include annual state- or county-specific counts or rates with no stratification.
5. 95% Poisson confidence interval for 0 is 0 to 3/n.
Calculation of the RSE

Depending on whether the data follow a Poisson or Binomial statistical distribution, methods for calculation of the RSE differ.

When data follow a Poisson distribution, the RSE is calculated as follows:
• A = count of events
• B = population
• Rate = A/B
• SE = Standard Error = SE of the rate = $\sqrt{\frac{\text{rate}(1 - \text{rate})}{\text{population}}} = \frac{\sqrt{A}}{B}$
• Percent RSE = 100(SE/rate) which simplifies to 100($\sqrt{A}/A$.
• Note that counts of 16 or less will have RSE > 25%

When data follow a Binomial distribution, the RSE is calculated as follows:
• A = numerator
• B = denominator
• Proportion = A/B
• SE = Standard Error = $\sqrt{\frac{\text{proportion}(1 - \text{proportion})}{B}}$
• Percent RSE = (SE/Proportion)100