The Utah Department of Health (UDOH) is committed to providing useful data to the public to inform policy and guide interventions while also protecting the privacy of individuals and presenting accurate and reliable results. Individuals may include patients, clients, employees, providers, or any other unit who has or may have rights of privacy or confidentiality. To this end the following are data suppression/data aggregation guidelines developed to inform data release.

Programs need to take into consideration laws governing their data. Some programs may have laws or regulations that allow data release using different standards. In the absence of other standards we suggest the criteria below. The data stewards for each data source, in conjunction with their privacy and security officers, are the decision makers to determine which criteria to apply. Data stewards should consider using the stricter criteria of all those that may apply.

Considerations

Data suppression/aggregation rules have two main purposes: (1) to protect against release of identifying information; and (2) to release data with a maximum amount of precision so that it can be used in decision making. To that end the data steward should consider all data elements being released, the size of the population from which the data comes, and the relative standard error. For example, releasing an incidence of 2 cases in Salt Lake County may not be identifying, but two cases in Blanding along with age, gender, race, or ethnicity may be.

Criteria

Reporting survey data:
Only report when ≥ 11 cases in the numerator

Reporting population and chronic disease data:
Typically you would not report counts less than 11. The base population should be at least 100 (Note that if additional characteristics such as gender, age, race or others are included, then determination of the base population would include the same criteria).   In all cases, the ratio of numerator to denominator must also be considered. When the base population is low and the prevalence is high (the numerator and denominator are close to the same) then the information could potentially be identifying. Avoid reporting where the count and the base population are close enough in size to risk loss of privacy. Examples: 5 cases of X in the state of Utah may be okay to report if there is no other information being released with it that is sensitive. 75 cases of X in a town with only 90 people may be problematic.

Reporting communicable disease data:
Small numbers may be released if in the best interest of the state as determined by the state epidemiologist, the UDOH Executive Director, or the Executive Leadership Team and the base population is at least 100 (Note that if additional characteristics such as gender, age, race or others are included, then determination of the base population would include the same criteria)

For all three types of data a statistician, or other epidemiologist should review to provide due diligence to ensure that the probability of identification is negligible given the numerator, denominator, and population characteristics.

If you are able to calculate Relative Standard Error (RSE) also use criteria below:

Only report when RSE $\leq$ 50%

If 30% < RSE $\leq$ 50% an asterisk should be included with a footnote that says: *Use caution in interpreting, the estimate has a relative standard error greater than 30% and does not meet UDOH standards for reliability.* Age-adjusting RSE should be calculated based on crude rate and then applied to age adjusted rates.

If one data element in a table has to be suppressed, then enough other elements must be suppressed to prevent data users from being able to calculate the suppressed field. (e.g. if the data value in a cell is suppressed, also suppress the total count or rate)

Calculating Relative Standard Error

Survey data:

If the estimated percentage is $\leq$50% then RSE=100X(SE(R))/R

If the estimated percentage is $\geq$50% RSE=100X(SE(R))/(1-R)

Count data:

RSE =SQRT(100,000/P*R)

For counts <20 where the Poisson distribution is used to calculate CI

100 x [(UCL-LCL)/(2 x 1.96 x rate)]

When age-adjusting RSE should be calculated based on crude rate and then applied to age adjusted rates.