Tulsa City-County Health Department
Standard 9 Baseline Study Methods When Using Routine Inspection Data

Selection of Facilities

All Tulsa County food establishments were categorized into four industry types (if applicable): Healthcare, Schools, Restaurants, and Retail Food Stores. Each industry type typically had more than one facility type or subclass, except schools. Healthcare is comprised of both hospitals and long-term care establishments that serve residents and public guests. All K-12 schools were included in this study. Restaurants were broken down into fast food and full service. Retail Food Stores were broken down into grocery and convenience. Grocery is defined as an establishment with one or more departments that does not have a gas station directly associated with the establishment. Convenience, on the other hand, is an establishment that sells similar but a more limited selection of grocery items usually with a gasoline service as a primary feature of the establishment.

All establishments are also categorized by risk: high, medium and low. High and medium facilities serve Time/Temperature Control for Safety TCS foods. Low risk establishments primarily serve pre-packaged foods. All low risk establishments were excluded from this study.

Selection of Inspections

Only inspections with the following purpose were included: Routine, Compliance, Complaint and FBI Complaints, and New Establishment. Purposes excluded were Closed, AMC and Other inspections since the first 35 compliance items were not required fields.

Quality Assurance

1. The first 35 compliance items are required fields for full inspections referenced above. All CDC risk factors compliance items selected are within the first 35 items/priority and priority foundation items.
2. Consistent response options through drop down boxes.
3. Three years' worth of inspections were used because of the following considerations:
    a. In order to determine whether the risk factor is improving or declining, three points in time are a minimum
    b. Captures the most recent inspections
    c. FY2020 had fewer inspections than normal. Including the two years proceeding help to normalize the data

Statistical Analysis

1. Sample size was a non-factor since separating the data into sets per industry type and then again by facility type made it manageable. Including all data negated the necessity for selecting a sample and determining confidence intervals.
2. Descriptive statistics were used to describe the data set per industry type
3. Calculate compliance percentages for food safety behaviors/practices or each compliance item

$$\% \text{ In Compliance} = \frac{\text{Total \# of in compliance observations for the data item}}{\text{Total \# of observations (IN \& OT) for the data item}} \times 100$$

Represents the proportion of establishments where that data item was found IN (ex. 8 out of ten had improper cooling marked IN. This does NOT mean foods were cooled 80% of the time but rather 80% of all proper cooling observations were IN.)

4. Use the same calculations for each risk factor by totaling the INs and OUTs for all associated compliance items.
5. Define percentages IN Compliance for what is controlled versus a need for change. In other words, In Compliance percentage indicates how well the establishment controls food safety practices and behaviors (risk factors) that are related to the occurrence of foodborne illness outbreaks. The lower the percentage, the more significant the risk to the consumer.

Table 4

IN Compliance %	Priority
Greater than 90%	Risk factor is well controlled
90% - 71%	Risk factor needs improvement
70% - 61%	Risk factor is of special concern
Less than 60%	Risk factor is priority

6. Graph risk factors over time. Each fiscal year a separate bar on the graph

Risk Factors Over Time

	Active Managerial Control	Improper Holding Temperature	Inadequate Cooking	Contaminated Equipment	Food from Unsafe Source	Poor Personal Hygiene	Total for ALL COMBINED DATA ITEMS
2017-2018 % IN Compliance	97.1%	78.6%	100.0%	80.4%	100.0%	95.5%	89.6%
2018 - 2019 % IN Compliance	100.0%	86.8%	100.0%	86.7%	100.0%	97.8%	93.3%
2019 - 2020 % IN Compliance	100.0%	93.9%	0.0%	88.9%	100.0%	97.0%	95.0%

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