CIFOR Target Ranges for Select Performance Measures

Interested in calculating the CIFOR target range performance measures for your jurisdiction, but have questions or need assistance? Contact Joshua.rounds@state.mn.us

Background

The Council to Improve Foodborne Outbreak Response (CIFOR) *Guidelines for Foodborne Disease Outbreak Response* were developed to serve as a comprehensive source of information on foodborne disease investigation and control and include measurable performance indicators of effective surveillance for enteric diseases and for response to outbreaks by state and local public health officials.

Since publication of the first edition of the *Guidelines* in 2009, there has been more emphasis placed on performance, accountability and transparency by public health agencies. Therefore, a need was identified to develop target values to help state and local public health agencies document their performance and effectiveness for foodborne disease surveillance and outbreak control activities. Given the distributed public health system with multiple independent jurisdictions, having performance targets will also provide a framework for communicating best practices for surveillance activities and create clear expectations for performance that will increase the likelihood of compliance.

The target ranges for selected CIFOR *Guidelines for Foodborne Disease Outbreak Response* performance measures were developed in response to a request for proposals by the Council of State and Territorial Epidemiologists (CSTE) on behalf of CIFOR. The overall goals of the project were to develop a set of core of measures feasible for all states to collect and explanations of how to do so and why. These were to be based on the performance indicators in Chapter 8 of the CIFOR *Guidelines* and on those developed and used by the Centers for Disease Prevention and Control (CDC) Foodborne Diseases Centers for Outbreak Response Enhancement (FoodCORE). The project was developed to provide justifications for the public health importance of the specific target values and how to measure them.

The performance measures and target ranges, along with Minnesota values for 2013, are provided in the table below. For more information on the CIFOR target range performance measures please visit http://www.cifor.us/projmetrics.cfm.

Minnesota CIFOR target range performance measures for 2013

CIFOR performance measure	Measurement methods	Target Range	Minnesota 2013 Performance
1. Foodborne illness complaint reporting system:	If an agency has any complaint system in place and it is used to review foodborne illness complaints, it will be considered	**Preferable:** Electronic database **Acceptable:**	**Preferable:** Minnesota maintains an electronic database for all complaints

Metric: Agency maintains logs or databases for all complaints or referral reports from other sources alleging food-related illness, food-related injury or intentional food contamination, and routinely reviews data to identify clusters of illnesses requiring investigation.	acceptable. If an agency had an electronic database that can be systematically reviewed to link complaints, it will be considered optimal.	System to log complaints	
2. <u>Outbreaks detected from complaints:</u> **Metric:** Outbreaks detected from complaints: Number outbreaks detected as a result of foodborne illness complaints. Rate of outbreaks detected per 1,000 complaints received.	Determine the number of foodborne illness complaints that were received during the year. This will be the denominator for the metric. Determine the number of foodborne illness outbreaks that were detected as a result of a foodborne illness complaint investigation during the year. This will be the numerator for the metric. Divide the numerator by the denominator and multiply by 1,000. This will convert the observed numbers into a standardized rate.	***Preferable:** >20 outbreaks / 1,000 complaints **Acceptable:** 10-20 outbreaks / 1,000 complaints *Evidence base may not always support value judgment on range. Very low numbers of documented complaints could inflate the observed rate.	**Preferable:** (29 complaint outbreaks / 704 complaints) x 1,000 = **41.2** outbreaks per 1,000 complaints
3. <u>Foodborne illness outbreak rate:</u> **Metric:** Number foodborne outbreaks reported, all agents. Rate of outbreaks reported per 1,000,000 population.	Determine the population of the jurisdiction. This will be the denominator for the metric. Determine the number of foodborne illness outbreaks that were reported during the year. This will be the numerator for the metric. Divide the numerator by the denominator and multiply by 1,000,000. This will convert the observed numbers into a standardized rate.	**Preferable:** > 6 outbreaks / 1,000,000 population **Acceptable:** 1-6 outbreaks / 1,000,000 population	**Preferable:** (42 outbreaks / 5,420,380) x 1,000,000 = **7.75** outbreaks per 1,000,000 population
4. <u>Confirmed cases with exposure history obtained:</u> **Metric:** Number and % of confirmed cases with exposure history obtained.	Determine the number of confirmed cases reported. This will be the denominator for the metric. Determine the number of confirmed cases with exposure history obtained. This will be the numerator for the metric. Divide the numerator by the denominator and multiply by 100. This will convert the observed numbers into a standardized rate.	**A. *Salmonella*** **Preferable:** > 75% of cases **Acceptable**: 50-75% of cases **B. *E. coli* (STEC)** **Preferable:** > 75% of cases **Acceptable**: 50-75% of cases **C. *Listeria*** **Preferable:** > 75% of cases **Acceptable**: 50-75% of cases	**A. *Salmonella*** **Preferable:** 719/810 = **88.8%** **B. *E. coli* (STEC)** **Preferable:** 260/283 = **91.9%** **C. *Listeria*** **Preferable:** 12/12 = **100%**
5. <u>Isolate/CIDT-positive clinical</u>	Determine the number of confirmed cases	**A. *Salmonella***	**A. *Salmonella***

specimen submissions to PHL: **Metric:** Isolate/CIDT---positive clinical specimen submissions to public health laboratory (PHL): Number and % of isolates from confirmed cases and clinical specimens from patients diagnosed by culture independent diagnostic test (CIDT), submitted to PHL.	reported. This will be the denominator for the metric. Determine the number of isolates submitted to the PHL. This will be the numerator for the metric. Divide the numerator by the denominator and multiply by 100. This will convert the observed numbers into a standardized rate.	**Preferable:** > 90% of isolates/ CIDT-positive clinical specimens **Acceptable**: 60-90% of isolates/ CIDT-positive clinical specimens **B. *E. coli* (STEC)** **Preferable:** > 90% of isolates/ CIDT-positive clinical specimens **Acceptable**: 60-90% of isolates/ CIDT-positive clinical specimens **C. *Listeria*** **Preferable:** > 90% of isolates/ CIDT-positive clinical specimens **Acceptable**: 60-90% of isolates/ CIDT-positive clinical specimens	**Preferable:** 796/810 = **98%** **B. *E. coli* (STEC)** **Preferable:** 264/283 = **93%** **C. *Listeria*** **Preferable:** 12/12 = **100%**
6. PFGE subtyping of isolates: **Metric:** No. and % of isolates with pulsed field gel electrophoresis (PFGE) information.	Determine the number of isolates submitted to the PHL. This will be the denominator for the metric. Determine the number of isolates with PFGE information. This will be the numerator for the metric. Divide the numerator by the denominator and multiply by 100. This will convert the observed numbers into a standardized rate.	**A. *Salmonella*** **Preferable:** > 90% of isolates **Acceptable**: 60-90% of isolates **B. *E. coli* (STEC)** **Preferable:** > 90% of isolates **Acceptable**: 60-90% of isolates **C. *Listeria*** **Preferable:** > 90% of isolates **Acceptable**: 60-90% of isolates	**A. *Salmonella*** **Preferable:** 1039/1039 = **100%** **B. *E. coli* (STEC)** **Preferable:** 376/376 = **100%** **C. *Listeria*** **Preferable:** 49/49 = **100%**
7. Isolate/CIDT-positive clinical specimen submission interval: **Metric:** Median number days from collection of clinical specimen to receipt of isolate or clinical specimen from a patient	For each isolate, determine the date of specimen collection and the date of receipt at the PHL. Determine the number of calendar days between these dates, which is the isolate submission interval. Analyze the distribution of all known isolate	**A. *Salmonella*** **Preferable:** < 7 days **Acceptable**: 7-8 days **B. *E. coli* (STEC)** **Preferable:** < 7 days	**A. *Salmonella*** **Preferable: 5 days** (796 specimens) **B. *E. coli* (STEC)**

diagnosed by CIDT, at PHL.	submission intervals for the year. Report the median value for isolates with known isolate submission intervals. Determine the percentages of isolates with missing information for which an isolate submission interval cannot be determined.	**Acceptable**: 7-8 days **C. *Listeria*** **Preferable:** < 7 days **Acceptable**: 7-8 days	**Preferable: 3 days** (264 specimens) **C. *Listeria*** **Preferable: 6 days** (12 specimens)
8. <u>Isolate subtyping interval:</u> **Metric:** Median number days from receipt of isolate to PFGE subtyping results.	For each isolate, determine the date of receipt at the PFGE laboratory and the date of upload to PulseNet. Determine the number of calendar days between these dates, which is the isolate subtyping interval. Analyze the distribution of all known isolate subtyping intervals for the year. Report the median value for isolates with known isolate subtyping intervals. Determine the percentages of isolates with missing information for which an isolate subtyping interval cannot be determined.	**A. *Salmonella*** **Preferable:** < 4 days **Acceptable**: 5-6 days **B. *E. coli* (STEC)** **Preferable:** < 4 days **Acceptable**: 5-6 days **C. *Listeria*** **Preferable:** < 4 days **Acceptable**: 5-6 days	**A. *Salmonella*** **Preferable: 2 days** **B. *E. coli* (STEC)** **Preferable: 2 days** **C. *Listeria*** **Preferable: 4 days**
9. <u>PHEP *E. coli* O157 and *Listeria* subtyping interval:</u> **Metric:** PHEP *E. coli* O157 and *Listeria* subtyping interval: % of PFGE subtyping data results for *E. coli* O157:H7 and *Listeria* submitted to the PulseNet national database within four working days Of receiving isolate at the PFGE laboratory.	Determine the number of isolates submitted to the PHL. Determine the number of isolates for which PFGE subtyping was performed. This will be the denominator for the metric. Determine the number of number of primary patterns from subtyped isolates uploaded to PulseNet. Determine the number of results from PFGE subtyped isolates that were submitted to PulseNet within four working days of receipt at the PFGE laboratory. This will be the numerator for the metric. Divide the numerator by the denominator and multiply by 100.	**Acceptable**: > 90% of PFGE subtyping results submitted to PulseNet within 4 working days.	**Acceptable:** 416/423 = **98.3%**
10. <u>Outbreak clinical specimen collections:</u> **Metric:** Outbreak clinical specimen	Determine the number of foodborne illness outbreaks that were investigated. This will be the denominator for the metric. Determine the number of outbreaks for	**Preferable:** > 75% of outbreaks **Acceptable**: 50-75% of outbreaks	**Preferable:** 33/42 = **78.6%**

collections: Number and % of outbreak investigations with clinical specimens collected and submitted to PHL from two or more people.	which clinical specimens were collected and submitted to the PHL from 2 or more people. This will be the numerator for the metric. Divide the numerator by the denominator and multiply by 100.		
11. <u>Cluster investigation interval:</u> **Metric:** Median number days from initiation of investigation to identification of source.	Determine the number of clusters that were detected by the PHL. Determine the number and percentage of clusters where a source was identified. For each cluster for which a source was identified, determine the date at which the investigation was initiated and the date at which the source was identified. Determine the number of calendar days between these dates, which is the cluster investigation interval. Analyze the distribution of all known cluster investigation intervals for the year. Report the median value for investigations with known cluster investigation intervals.	**Preferable:** < 7 days **Acceptable**: 7-21 days	**Preferable: Median 2.5 days**
12. <u>Complaint investigation interval:</u> **Metric:** Median number days from initiation of investigation to implementation of intervention.	Determine the number of foodborne illness complaints that were investigated. Determine the number and percentage of foodborne complaint investigations that led to an intervention. For each complaint investigation that led to an intervention, determine the date at which the investigation was initiated and the date at which an intervention was initiated. Determine the number of calendar days between these dates, which is the complaint investigation interval. Analyze the distribution of all complaint investigation intervals for the year. Report the median value for complaint investigation intervals.	**Preferable:** < 7 days **Acceptable**: 7-21 days	**Preferable: Median 0 days**
13. <u>Cluster source identification:</u> **Metric:** Number and % of clusters with	Determine the number of clusters that include five or more cases. This will be the denominator for the metric. Determine the	**Preferable:** > 20% of clusters with > 5 cases	**Preferable:** 11/17 = **64.7%**

more than five cases in which a source was identified.	number of clusters for which a source was identified that include five or more cases. This will be the numerator for the metric. Divide the numerator by the denominator and multiply by 100.	**Acceptable**: 10-20% of clusters with > 5 cases	
14. <u>Outbreak etiology reported to NORS:</u> **Metric:** Number and % of outbreaks for which etiology was identified and reported to the National Outbreak Reporting System (NORS).	Determine the number of foodborne outbreaks that were investigated. This will be the denominator for the metric. Determine the number of outbreaks for which an etiology was identified and reported to NORS. This will be the numerator for the metric. Divide the numerator by the denominator and multiply by 100.	**Preferable:** > 68% of outbreaks **Acceptable**: 44-68% of outbreaks	**Preferable:** 34/42 = **81.0%**
15. <u>Outbreak vehicle reported to NORS:</u> **Metric:** No. and % of outbreaks for which a vehicle was identified and reported to NORS.	Determine the number of foodborne outbreaks that were investigated. This will be the denominator for the metric. Determine the number of outbreaks for which a vehicle was identified and reported to NORS. This will be the numerator for the metric. Divide the numerator by the denominator and multiply by 100.	**Preferable:** > 60% of outbreaks **Acceptable**: 48-60% of outbreaks	**Preferable:** 27/42 = **64.3%**
16. <u>Outbreak contributing factor reported to NORS:</u> **Metric:** Number and % of outbreaks for which contributing factors were identified and reported to NORS.	Determine the number of foodborne outbreaks that were investigated. This will be the denominator for the metric. Determine the number of outbreaks for which a contributing factor was identified and reported to NORS. This will be the numerator for the metric. Divide the numerator by the denominator and multiply by 100**.**	**Preferable:** > 55% of outbreaks **Acceptable**: 33-55% of outbreaks	**Preferable:** 35/42 = **83.3%**