CHAPTER 15
METRICS

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1.0. PURPOSE

This chapter provides a set of metrics that identifies key goals and benchmarks for a Rapid Response Team (RRT). Application of these metrics over time will provide a data set that will inform improvement of individual RRTs, as well as improvement of the RRT concept and program.

2.0. SCOPE

This chapter provides metrics for specific RRT capabilities, as well as overarching response metrics and baseline response data.

3.0. RESPONSIBILITY

3.1. RRT Leadership (or investigatory team leadership, in states without an RRT)

RRT leadership is responsible for ensuring a response capability assessment is conducted on an annual basis, and that appropriate improvements are made based on the results of the assessment to ensure continual improvement of the RRT.

3.2. RRT Members (or investigatory team, in states without an RRT)

RRT members are responsible for playing an active role in maintaining both their subject matter expertise and ability to work effectively in multi-disciplinary and multi-agency response teams.

4.0. DEFINITIONS

- **Intervention –** The physical and/or administrative actions implemented by the RRT that attempt to cease or mitigate the *public health threat* associated with a specific human or animal food emergency. These actions may include but are not limited to product recalls, embargoes, seizures, import alerts, and license revocation.
- **Mobilization** – The activation of RRT members shortly after notification to initiate preliminary response activities such as correspondence with partner agencies/entities and recommending RRT activation to Agency Executives.
- **Notification** – The date and time when the RRT Coordinator (or equivalent) receives actionable information regarding a human or animal food emergency within its jurisdiction. This notification can originate from an entity that originally discovered the incident, has responded to the incident in a different jurisdiction or capacity, or has begun collecting/interpreting epidemiological data pertaining to the incident (if applicable).
- **Responder Endangerment** – Factors, both physical and mental, that may negatively impact the health and welfare of a RRT responder as a direct result of responding to an incident. Endangerment may occur in all environments associated with a response including office settings and vehicles. Physical factors include illnesses and injuries while mental factors may include personal threats, disturbing imagery, or experiences, etc. Physical injury or illness can be further classified based on severity (categories based on CDC guidance for field triage):
    - "Green" – "Walking-wounded," who exhibit injuries that do not require immediate treatment and/or transportation to a medical facility.
    - "Yellow" – Moderate to serious injury or illness, but is not immediately life threatening (e.g., fracture, mild burns).
    - "Red" – Serious but salvageable life-threatening illness or injury (e.g., severe bleeding, amputation, heart attack, severe burns).
    - "Black" – Individual is deceased at the scene with no apparent vital signs.
- **Response** – Activities that are officially conducted by the RRT in response to a

human or animal food emergency (may be part of a RRT Response or RRT Activation). These activities are specific to the incident and typically would not be conducted in the absence of a human or animal food emergency (e.g., focused product sampling, traceback/trace forward, product-specific pathogen analysis, etc.).

- **RRT Activation** – Agency Executives or designees approve activation of RRT (e.g., stand up of an IMT). Actual definition and triggers for activation are determined by each RRT individually and must be properly documented in SOPs or other RRT agreements/plans. Triggers which may be considered prior to a potential RRT activation could include the number of ill persons or deaths, possibility of incident escalation, severity of the health hazard, etc.

- **RRT Response** – RRT response activities, other than RRT Activations, to incidents with increased potential public health risk. These do not include routinely scheduled regulatory activities and may involve a broad range of incidents, including but not limited to human illness clusters and outbreaks, human or animal food contamination incidents with no human illnesses, requests for emergency assistance from another agency, large planned events, severe weather events, and other human or animal food emergencies. RRT Responses are those requiring enhanced coordination, communication, subject matter expertise, and technical skills that RRT members have developed.

5.0. BACKGROUND

This set of metrics seeks to identify key goals and benchmarks for a RRT and was developed by a working group representing several different RRTs. The group discussed a variety of factors and variations for these metrics. This group sought to identify metrics as   specific, measurable benchmarks to be achieved. These metrics are a way to measure how groups implement key components of the best practices.

Note: Section 8.3 "Baseline Response Data" are separate from the metrics; identifying a range of variables that can be tracked over time for informational purposes (not for scoring).

It is expected that these metrics will continue to be modified and developed over time to optimize appropriateness, effectiveness, etc.

6.0. SAFETY

N/A

7.0. EQUIPMENT/MATERIALS

N/A

8.0. PROCESS DESCRIPTION

8.1. Metrics for RRT Manual Chapters

- **Working with other Agencies (WWOA)**
  - Completes at least one Homeland Security Exercise and Evaluation Program (HSEEP) qualified exercise or real time event with relevant partner agencies to test/implement response procedures within the last 18 months. Documents lessons learned from the exercise or the event and develop a plan to improve or enhance any procedures that are developed.
  Score:_____ (Full=5, Partial=3, Not started=0)

- **Industry Relations**
  - Has written Standard Operating Procedures (SOPs) to contact industry partners early on in investigations where appropriate to increase awareness or share technical assistance.
  Score:_____ (Full=5, Partial=3, Not started=0)
  - Process established to identify lessons learned from foodborne outbreak investigations and share them with industry or incorporate them into training for industry.
  Score:_____ (Full=5, Partial=3, Not started=0)

- **Food Emergency Response Plan (FERP)**
  - Has a FERP and reviews it every 24 months.
  Score: _____ (Full=5, Partial=3, Not started=0)
  - Identifies all principal agencies (see National Association of State Departments of Agriculture ((NASDA) Template) providing representation from federal, state, local, tribal, and territorial (SLTT) programs and their responsibilities in the state FERP.
  Score:_____ (Full=5, Partial=3, Not started=0)

- **Communication SOPs**
  - Maintains a **contact list** for applicable SLTT and federal agencies. Updates list at least every 12 months.
  Score:_____ (Full=5, Partial=3, Not started=0)
  - Reviews and tests a **written procedure for notifying** members of the RRT and other applicable agencies of emerging events every 12 months.
  Score:_____ (Full=5, Partial=3, Not started=0)

- **Incident Command System**
  - Uses Incident Command System (ICS)/ National Incident Management System (NIMS) with state and local or state and federal entities in 100% of foodborne illness responses in which the RRT is activated*.
  Score:_____ (Full=5, Partial=3, Not started=0)
  - Uses Incident Action Plans (IAPs) during 100% of RRT activations, regardless of event magnitude (although some incidents may not get to the

stage where IAPs are used due to low complexity level).
Score:_____ (Full=5, Partial=3, Not started=0)

*RRT activation may not occur for every event where an agency responds. The small scale of many incidents does not warrant the formation of Unified Command or the use of the ICS. The intent of this metric is to capture data relative to those events where the RRT was activated for the response.

- **Training**
  There will always be some timing and other circumstantial factors (e.g., when these metrics are assessed, staff changes, when certain courses are available) that would impact the percentages identified below. Several of the metrics below include a timeframe under which it is expected that these goals be approached. (During that timeframe, teams may want to exclude "member-in- training" staff from these calculations.)

  It is also understood that these components may build upon each other so there may be some necessary differences in progress for different goals.

  - 100% (from the start) of field teams and the program's RRT food subject matter experts (SMEs) have completed the basic inspection training program described in the Manufactured Food Regulatory Program Standards (MFRPS). (SMEs brought in from other areas for unique responses are excluded from this requirement. However, this is required for those frequently involved in RRT responses.)
    Score:____ (Full=5, Partial=3, Not started=0)
  - 100% (within three months of assignment to RRT) of staff in a leading position (Command Staff, General Staff, and Field Team Leads) responding to emergency have completed ICS 100, 200, 700, and 800.
    Score:____ (Full=5, Partial=3, Not started=0)
  - 100% (within 12 months of assignment to RRT) of Command Staff, General Staff, and Field Team Leads responding to emergency have completed ICS 300 and 400.
    Score:_____(Full=5, Partial=3, Not started=0)
  - 75% of field team staff and 100% of field team leaders have completed advanced courses in epidemiology and foodborne illness investigations including Epi-Ready or the equivalent. (Note: Field team percentage not intended to include staff assigned in surge capacity where they are coming to support the response and carry out specific assigned tasks that are within the scope of their training and routine work (i.e. sampling, etc.)
    Score:_____(Full=5, Partial=3, Not started=0)
  - Each field team when deployed has at least one team member with advanced training in the activities needed to conduct the investigation. For example, seafood HACCP, juice HACCP, sampling, etc.
    Score: ___ (Full=5, Partial=3, Not started=0)
  - RRT conducts a training review every 12 months. An improvement plan is

developed for any gaps in meeting the requirements above. (This is intended for non-MFRPS states. MFRPS States would include RRT-specific Training (program training) as a part of the MFRPS review.)
Score:_____(Full=5, Partial=3, Not started=0)

- **Tracebacks**
  - Conducts an annual review of written traceback procedures.
    Score: _____ (Full=5, Partial=3, Not started=0)
  - Includes use of traceback procedure in at least one response or exercise every 12 months.
    Score:_____(Full=5, Partial=3, Not started=0)

- **Environmental Assessments**
  - 100% of RRT field response team leads and SMEs have been trained in conducting environmental root-cause assessments and/or using the environmental investigation tools.
    Score _____ (Full=5, Partial=3, Not started=0)

- **Recalls**
  - RRTs share 100% of the retail distribution lists they developed for recalled food products with the agencies responsible for overseeing retail food safety, when this information is not subject to restriction by Memorandum of Understanding (MOU), FDA Commissioning rules, or other legal requirements.
    Score:_____(Full=5, Partial=3, Not started=0)
  - Maintains written procedures for conducting recall activities. Conducts a review of these procedures every 12 months and develops an improvement plan for any gaps identified during the review.
    Score:_____ (Full=5, Partial=3, Not started=0)
  - Recall coordinators (federal and SLTT) participate in meetings at least every six months with partner agencies' recall coordinators to share information and review procedures for coordinating recall activities.
    Score:_____(Full=5, Partial=3, Not started=0)

- **After Action**
  - Completes an after-action meeting with state, local and federal partners (as appropriate) that participated in a multi-agency response within 45 days of completion of the response investigation.
    Score: _____ (Full=5, Partial=3, Not started=0)
  - 100% of after-action issues related to team performance or skill development are incorporated into improvement plans. If improvement plans are not utilized due to legal or other issues, all action issues are incorporated into future trainings.
    Score: _____(Full=5, Partial=3, Not started=0)

- **Tools and Equipment**
  - RRT has conducted and documented an inspection and/or function testing of key response equipment and supplies within the last 12 months. Perishable supplies nearing the end of their usable shelf life and broken equipment identified during the inspection was replaced or scheduled for replacement.
    Score:_____(Full=5, Partial=3, Not started=0)

8.2. Overarching (Response) Metrics

This metric serves to evaluate overall capacity for an RRT. This was developed by the Working Group and is expected to develop further in the future based on use of the metrics.

- **Concepts for Evaluating "Overall Effectiveness"**
  - Scoring criteria are identified for each of the 24 metric items (an individual metric item with a score of 5 = full achievement of the metric, 3 = partial achievement, or 0 = not started). For purposes of scoring each metric, scores of 1, 2 and 4 are not used.
  - Use the following equations to calculate the overall effectiveness score (a measure of program effectiveness) and the average score for each RRT:
    - Overall Effectiveness Score = Sum of all metric items
    - Average Score = Overall Effectiveness Score ÷ total number of metric items (current number=24)
  - A goal for the RRT would be to have an average of 4.0 or higher at the end of three years.

- **Yearly Goals in the Development of an RRT**
  - End of 1st year: Average score of 2.0 across all metric items.
  - End of 2nd year: Average score of 3.0; ≤4 metric items that are "not started".
  - End of 3rd year: Average score of 3.5; ≤ 2 metric items that are "not started".
  - End of 4th year (and beyond): Average score of 4.0; 0 metric items that are "not started".

8.3. Baseline Response Data

Baseline data is collected to use as standards for tracking and evaluating your program's progress over time. The list below provides examples of data elements that can be used as baseline data for RRT to collect and serve as a guide for development of future metrics. Please note that these are data elements for which benchmarks have not been identified and that are often used for complex outcomes.

- Average time from RRT mobilization to field team deployment. (Approximate hours, over 12 months)

- Average time from identification of implicated food until boots on the ground (deployed on-site to the facility) at the responsible facility/operation. (Approximate hours, over 12 months)
- Average time from identification of implicated food to completion of traceback (identification of the source or determination that a source could not be identified). (Approximate hours, over 12 months)
- Average time from the identification of adulterated food item until a consumer advisory is issued. (Approximate hours, over 12 months)
- Average time from RRT mobilization to intervention. (Approximate hours, over 12 months)
- Average time from sample receipt by lab to organism identification or results reported. (Approximate hours, over 12 months)
- Average time from sample receipt by lab to WGS results reported to Pulse-Net. (Approximate hours, over 12 months)
- Percentage of traceback investigations that successfully result in identification of an implicated food. (Over 12 months)
- For all incidents where a root cause analysis was initiated[1], identify the percentage of incidents where a root cause or significant contributing factors were identified in a 12-month period. (Over 12 months)
- Short of root cause identification, percentage of incidents (out of all incidents where a root cause analysis was initiated) in which at least one contributing factor to the contamination was identified? (Over 12 months)
- Number of responder endangerments per year. (Over 12 months)

9.0. DESIRED OUTCOMES (ACHIEVEMENT LEVELS)

N/A

10.0. RELATED DOCUMENTS

- Chapters of the RRT Best Practices Manual

11.0. REFERENCES AND OTHER RESOURCES

- FDA Manufactured Food Regulatory Program Standards: Standard 8 resources assessment.

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[1] A root cause analysis should be initiated in all investigations, where possible and practical. Identification of root cause/contributing factors is an indicator of the quality of the investigation. A root cause analysis is any systematic process for identifying a root cause, such as an environmental assessment.

12.0. ATTACHMENTS

- Attachment A – Field Equipment and Supplies Example Checklist (from MA RRT)
- Attachment B – Metrics Worksheet

13.0. DOCUMENT HISTORY

Version #	Status*	Date	Author
1.0	I	7/16/12	RRT Metrics WG (CA**, MA, NC, TX,
1.1	R	1/23/13	ORA/OP
1.2	R	5/26/17	ORA/OP
2.0	R	5/1/2023	ORA/OP-AFDO Compiled Revisions
3.0	R	12/1/2024	ODP-AFDO Compiled Revisions

*Status Options: Draft (D), Initial (I), Revision (R), or Cancel (C)
**Workgroup Lead

Change History

1.1 – Revisions for clarification purposes as per RRT submitted recommendations.

1.2 – Minor editorial revisions to formatting to align with overall 2017 RRT Manual Edition revision effort.

2.0 – AFDO compilation for 2023 Edition of RRT Manual

3.0 – AFDO compilation for 2025 Edition of RRT manual. Updated FDA program names resulting from the 10/2024 FDA reorganization.

Attachment A – Field Equipment and Supplies Example Checklist

Massachusetts Department of Public Health
Bureau of Environmental Health
305 South Street
Jamaica Plain, MA 02130-3597
(617) 983-6700   (617) 983-6770 – Fax

Food Protection Program
Policies, Procedures and Guidelines

Issue: Field equipment, and supplies	No: OP-18

FIELD EQUIPMENT	Assigned	Available	Pending
Inspector Badge			
Inspector Business Cards	X		
State I.D.	X		
Cell Phone/Charger	X		
Laptop Computer/Case	X		
Equipment Storage Bin	X		
Digital Camera/Batteries	X		
Infrared Thermometer		X	
150º-160ºF Temp. Sensitive Tapes	X		
Disposable Gloves (Non-Latex)	X		
Flashlight/Batteries	X		
Sanitizer Test Kits (chlorine, iodine, quaternary ammonia)	X		
pH test papers	X		
Measuring Tape	X		
Thermocouple		X	
Black Light/Battery/Bulb		X	
Food Stem Thermometer	X		
Briefcase	X		
FPP Seals	X		
Alcohol Swabs	X		

DOCUMENTS			
Regulations		X	
Policies	X		
Emergency Response Plan		X	
Emergency Contact Form	X		
Inspection Forms	X		
Enforcement Forms	X		
Food Security Documents	X		

State-wide Maps	X		
PROTECTIVE EQUIPMENT			
TYVEK Coveralls	X		
Disposable Foot Covers	X	X	
Protective Eyewear	X		
Hearing Protection	X		
Protective Breathing Equipment	X		
Reflective Safety Vest	X		
SAMPLE COLLECTION KIT			
Duffle Bag	X		
FPP Specimen/Sample Receipt Forms	X		
BT Collection Forms		X	
Biohazard Labels		X	
Exterior Transport Bag		X	
Interior Specimen Bag	X		
Collection Tubes		X	
Document Pouch			
First Aid Kit			
Indelible Markers	X		
Scissors/Utility Tool	X		
Cotton Applicators	X		
Tongue Depressors	X		
Sterile Wipes/Swabs	X		
Forceps	X		
Utility Knife	X		
Cooler	X		
Ice/Gel Packs		X	
Magnifying Glass		X	
Biohazard Bag		X	

Attachment B – Metrics Worksheet

Metrics for RRT Manual Chapters & Overall Effectiveness Score

Chapter/Metric Item	Score: Full=5, Partial=3, Not started=0	
8.1.1 WWOA	1	
8.1.2 Industry Relations	1	
	2	
8.1.3 FERP	1	
	2	
8.1.4 Communication SOPs	1	
	2	
8.1.5 ICS	1	
	2	
8.1.6 Training	1	
	2	
	3	
	4	
	5	
	6	
8.1.7 Tracebacks	1	
	2	
8.1.8 Environmental Assessments	1	
8.1.9 Recalls	1	
	2	
	3	
8.1.10 After Action	1	
	2	
8.1.11 Tools & Equipment	1	

Overall Effectiveness Score (SUM)
Average (=SUM/24)