

Appendix 4: DRAFT Measurement Descriptions and Methods of Data Collection

The following table provides additional explanation of the measures, frequency of measurement, and proposed data collection methods. This information will be revised over time.

Related CDC Goal	Measure	Level of Measurement	Method of State/Local Collection ¹	Method of CDC Collection	Additional Explanation/Remarks
1	1. Percent of public health employees who have emergency response roles documented in their job descriptions that are trained in Incident Management	State and all locals in MSA	Documentation review	Semi-annual Progress report	Numerator=# of employees with emergency response roles in their job descriptions who have been trained in IM within the last 24 months Denominator=# of employees with emergency response roles in their job descriptions
1	2. Time to organize a NIMS-compliant medical and public health operations functional area with hospitals that supports: <ul style="list-style-type: none"> • incident epidemiological profiling • pre-hospital care • medical care • mental health • hazard threat/disease containment • mass casualty care (Target: 3 hours of plan activation)	State and all locals in MSA jointly	Drill, exercise, or real event	Annual progress report	
1	3. Time from request for mutual aid to	State and all	Drill, exercise	Annual	Time from request of aid

¹ Drill = test of a component of the response system (e.g., test the call down list, test the ability to receive a report 24/7/265)
Exercise = a full-scale test of the entire public health response system

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	acknowledgement that request has been approved	locals in MSA	or real event	progress report	from local, State, or Federal partners until an acknowledgement is received that the request has been approved
1	4. Time to complete the notification/alerting of the initial wave of personnel to staff emergency operations (Target: 60 minutes)	State and all locals in MSA	Drill, exercise, or real event	Quarterly progress report	Time from initiation of notification of the initial wave of personnel until all personnel have acknowledged the notification.
1	5. Time to have initial wave of personnel physically present to staff emergency operations (Target: 90 minutes from notification)	State and all locals in MSA	Drill, exercise, or real event	Semi-annual progress report	Time from notification until all personnel are physically present.
2	6. Time to receive confirmed case reports of immediately notifiable conditions by public health agency (includes Biowatch and BDS)	State and all locals in MSA	Documentation review	Annual progress report	Time from confirmation of condition to report receipt <i>Note: For this measure, it is not possible to determine when a clinician suspects a disorder. Therefore, this measure is restricted to confirmed case reports.</i>
2	7. Time for State to notify local/tribal or local/tribal to notify State of receipt of a suspicious or confirmed case report of an immediately notifiable condition (Target: 1 hour from receipt)	State and all locals in MSA	Drill, exercise or real event	Quarterly CDC initiated drill	Jurisdictions that have NO local public health agencies will be required to communicate with a local

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					government official (e.g., emergency manager, mayor/county commissioner, fire chief, police chief)
2	8. Time to have a knowledgeable public health professional answer a disease report call and begin taking the report 24/7/365 (Target: 15 minutes or less)	State and all locals in MSA	Drill, exercise, or real event	Quarterly CDC initiated drill	Time from call placement to response from a public health professional.
2	9. Percent of sub-typing data submitted to PulseNet within 72-96 hours of receiving isolate in the laboratory	State	Documentation review	Annual progress report	
2	10. Time to recommend public health courses of action to minimize human health threats identified in the jurisdiction's hazard and vulnerability analysis (Target: 60 days from identification of risk or hazard/120 days from cooperative agreement award).	State and locals in the MSA jointly	Documentation review	Annual progress report	After completing a risk and vulnerability assessment, public health agencies should recommend courses of action to minimize human health consequences of the identified risk/vulnerability. At the local level, this should be done jointly by all the health departments in the MSA.
3	11. Percentage of LRN biologic and chemical laboratories that demonstrate proficiency in: <ul style="list-style-type: none"> • confirming Category A agents in human clinical specimens (<i>proficiency in</i> 	State and local LRN labs	Per LRN/NCEH testing schedule	Obtain data from LRN/NCEH	The LRN has established proficiency testing programs for bio and chem, which currently operate on different

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	<p><i>accordance with CDC's Laboratory Response Network (LRN) proficiency testing program)</i></p> <ul style="list-style-type: none"> • confirming Category A agents in food samples • confirming the identity of and further characterizing (e.g., assessment of toxin production, serotyping, phage typing, and DNA “fingerprinting”) Salmonella (including Salmonella Typhi), Shigella species, Shiga toxin-producing E. coli and pathogenic vibrios isolated from FOOD samples • confirming Category A agents in environmental samples • confirming chemical agents in human clinical specimens 				<p>schedules. Data obtained during proficiency testing will be obtained from the LRN and used for this measure.</p>
3	<p>12. Time following initiation of an epidemiological investigation to begin obtaining or directing the acquisition of specimens/samples for laboratory analysis to support epidemiological investigation, as needed (Target: 60 minutes)</p>	State and all locals in MSA	Drill, exercise, or real event	Annual progress report	
3	<p>13. For clinical specimens, environmental samples and samples of potentially contaminated food collected by public health personnel in an emergency, time to:</p> <ul style="list-style-type: none"> ○ send clinical specimens to a reference 	State and all locals in MSA	Drill, exercise, or real event	Annual progress report	

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	<p>laboratory within the LRN when an incident may involve an infectious biological agent (Target: within 60 minutes of collection)</p> <ul style="list-style-type: none"> ○ send clinical specimens to the CDC or CDC-designated State laboratory when an incident may involve a hazardous chemical agent (Target: within 180 minutes of collection) ○ send environmental samples to a reference laboratory within the LRN when the incident requires biological or chemical characterization of an incident scene (Target: within 60 minutes of collection) ○ send potentially contaminated food samples to a reference laboratory within the LRN or coordinate with Food Emergency Response Network (FERN), as appropriate, when the incident might involve food contaminated with a biological or chemical agent² (Target: within 60 minutes of collection) 				
4	14. Percent of local public health agencies using BioSense or other integrated early event detection	State	Documentation review	Annual progress report	State is responsible for reporting the status of all

² Abrin, Acids and bases, Aconites, actinomycin type protein synthesis inhibitors, Adamsite, Aflatoxin, amanitin toxin (*Amanita phalloides*), Anatoxin B, Any potent carcinogens or teratogens (e.g. benzo[a]pyrene, accutane), Arsenic compounds, Azides, Barium salts, Cancer chemotherapeutic agents, Carbamates, cardioactive glycosides, Colchicine, Copper and arseno-copper compounds, Corrosives (permanganate, chromate, etc), Cyanides, Cycloheximide, Digoxin, Dioxin, Ergot alkaloids, Ethylene glycol, Fluoroacetate salts, Hallucinogens (PCP, LSD, myristosin, others), Ipecac/emetine, Lead compounds, Mercury compounds, Methanol, Microcystins, Nicotine, Organochlorine pesticides, Organophosphate pesticides, Paraquat, Pentachlorophenol and dinitrophenols, Ricin, Rotenone, Sodium nitrite, Strychnine, Superwarfarins, Tetramine, Tetrodotoxin, Thallium salts

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	system data.				local public health agencies in the jurisdiction.
4	15. Percent of desired non-traditional public health data sources that are currently part of early event detection system. (e.g., HMO encounter data, over-the-counter pharmaceutical sales)	State	Documentation review	Semi-annual progress report	Numerator: number of desired data sets that have been acquired and integrated into the early event detection system Denominator: number of desired data sets defined by State
5	16. Time to initiate epidemiologic investigation after the initial detection of a deviation from normal disease/condition patterns	State and all locals in MSA	Documentation review	Semi-annual progress report	Time from surveillance “trigger” or “signal” that shows deviation from normal patterns that may herald an outbreak to the beginning an investigation.
5	17. Time from initial detection of a deviation from normal disease/condition patterns OR initial report to initiation of intervention (e.g., dissemination of protective action guidance, treatment)	State and all locals in MSA	Documentation review	Semi-annual progress report	
6	18. Percent of key stakeholders that are notified/alerted using the public health emergency communication system (Target: 90%)	State and all locals in MSA	Drill, exercise, or real event	Quarterly progress report	Numerator=Number of successful transmissions to key stakeholders Denominator=Number of key stakeholders At least one drill per year

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					must be of a highest priority alert that requires an acknowledgement by the recipient
6	19. Time to issue information to the public that emphatically acknowledges the event; explains and informs the public about risk; provides emergency courses of action; commits to continued communication (Target: 60 minutes from activation of the response plan)	State and locals in MSA jointly	Drill, exercise, or real event	Semi-annual progress report	
6	20. Percent of key stakeholders that are notified/alerted when electricity, telephones, cellular telephone service, and Internet service are unavailable	State and all locals in MSA	Drill, exercise, or real event	Quarterly progress report	Numerator=Number of successful transmissions to key stakeholders when there is no electricity, phone, cellular, or Internet service Denominator=Number of key stakeholders
6	21. Percent of Level Three/Sentinel labs that can reach a designated contact at an LRN laboratory 24/7/365 by phone within 15 minutes OR radio/satellite phone within 5 minutes	All locals in MSA	Drill, exercise, or real event	Semi-annual progress report	Numerator=number of Level Three/Sentinel labs that can reach a contact at an LRN lab by phone within 15 minutes or radio within 5 minutes Denominator=number of Level Three/Sentinel labs in the jurisdiction
6	22. Time to obtain message approval and	State and	Drill, exercise,	Semi-annual	Adding the clarification

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	authorization for distribution of public health and medical information to clinicians and other responders (Target: 60 minutes from confirmation of health threat)	locals in the MSA jointly	or real event	progress report	allows this to be measurable. As previously written, (“provide information”) there is no clear demarcation of the start and stop points for measuring the time.
6	23. Percent of public health responders that have been trained and cleared to use PPE appropriate for their response roles	State and all locals in MSA	Documentation review	Annual progress report	Numerator=number of public health responders that are required to use PPE for their response roles who have been trained and medically cleared to use the required PPE within the last 12 months Denominator=number of public health responders that are required to use PPE for their response roles
6	24. Percentage of isolation orders that are violated	State and all locals in MSA	Documentation review	Annual progress report	Numerator=number of isolation orders issued to individuals that are violated Denominator=number of isolation orders issued to individuals
6	25. Percentage of quarantine orders that are violated	State and all locals in MSA	Documentation review	Annual progress report	Numerator=number of isolation orders issued to individuals that are violated Denominator=number of

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					isolation orders issued to individuals
6	26. Current rating on the SNS preparedness functions	State and all locals in MSA	SNS assessment	Obtain data from SNS	State=rating on State SNS assessment CRI cities=rating on CRI assessment Other locals=rating on local SNS assessment
6	27. Time to provide prophylactic protection and/or immunizations to all responders, including non-governmental personnel supporting relief efforts	State and all locals in MSA jointly	Drill, exercise, or real event	Annual progress report	Time to provide prophylaxis to all responders from authorization of the order to do so
6	28. Percent of volunteers needed to support epidemiologic investigation that have been trained	State and all locals in MSA	Documentation review	Semi-annual progress report	Numerator=number of volunteers that have been trained to support epidemiologic investigation Denominator=estimated number of volunteers needed to support epidemiologic investigation
6	29. Percent of volunteers needed to support mass prophylaxis that have been trained	State and all locals in MSA jointly	Documentation review	Semi-annual progress report	Numerator=number of volunteers that have been trained to support mass prophylaxis Denominator=estimated number of volunteers needed

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					to support mass prophylaxis
7	30. Time needed to issue interim guidance on risk and protective actions during recovery	State and all locals in MSA jointly	Drill, exercise, or real event	Annual progress report	Time from detection of a problem in food, soil, water, or vector control to issuance of guidance about risk and protective actions (e.g., boil water)
8	31. Percent of cases and exposed successfully tracked from identification through disposition to enable short- and long-term follow-up	State and all locals in MSA	Documentation review	Semi-annual progress report	Numerator=number of cases identified that were tracked through disposition Denominator=number of cases identified
9	32. Time needed to identify deficiencies in personnel, training, equipment, and organizational structure, for areas requiring corrective actions (Target: 72 hours after a real event or exercise)	State and all locals in MSA	Documentation review	Semi-annual progress report	
9	33. Time needed to implement corrective actions (Target: 60 days after identification of deficiency)	State and all locals in MSA	Documentation review	Semi-annual progress report	
9	34. Time needed to re-test areas requiring corrective action (Target: 90 days after identification of deficiency)	State and all locals in MSA	Documentation review	Semi-annual progress report	