

## Public Health Complexity Analysis Tool Guidance Document

*This guidance document is intended to clarify the questions asked in the complexity analysis tool as you familiarize yourself with the process. The tool itself can and should be used at multiple times throughout an incident; at least once per operational period and more often if changes are occurring rapidly.*

### Community Safety

- The event is severe
  - “Severity” is subjective and should be analyzed according to local capacity for response, considering local resources, staff, geography, and any intangibles. This question is deliberately open-ended.
- The impact volume or surge % is above 10%
  - Each agency should determine their own surge capacity, and for how long they can maintain this capacity, then use that number to answer this question. LPHAs should communicate with local hospitals to understand their surge capacity, as well.
- Community agencies are unable to handle the magnitude of this event
  - This question is deliberately open-ended and should be answered based on existing partnerships and resources in your community.
- Preventative measures are ineffective or not available
  - This refers to any preventative measures that are not medication/antibiotics. For example: face masks, mosquito spraying, staying home from work/school, boiling water or using bottled water, etc.
- Clinical prophylaxes are ineffective or not available
  - This refers to preventative measures that include medication or antibiotics.

### Permanent Infrastructure/Built Environment

- There is potential for creation of hazardous materials or biological waste
  - Will the incident result in used sharps? Hospital materials that need specialized storage and disposal? Contaminated water or soil?
- The age and viability of physical infrastructure is an impact
  - Is travel of responders restricted by aging bridges? Are pipes degraded and contaminated, contributing to a health issue? Are facilities unsafe for an intended purpose and/or unsuitable for response?

### Weather and other environmental influences

- There are seasonal influences or trends that effect response or transmission
  - Will snow storms impact our ability to respond, or force people to stay inside? Are you seeing flu-like symptoms outside of the flu season? Is monsoon season causing flooding or standing water? Consider both what is normal/expected and how weather might impact the issue.
- The vector type is unknown

### Cascading Events

- Emergency Support Function 11 (agriculture) is involved
  - Is an illness impacting livestock? Is an environmental issue threatening soil or water? For those of us in rural counties, an issue that impacts livestock or crops may elevate our response.
- Other Emergency Support Functions are involved
  - This may increase complexity and resources required.

### Transmission Patterns of the Infectious Disease *(this section may not be applicable to the disaster, but if it is, or if transmission patterns are multi-layered, may elevate your response)*

- Air/Droplet
- Bodily fluid transfer
- From human to human
- From animal to human
- Foodborne
- Waterborne
- Infectious agent survives outside host, can re-infect/hazardous material retains hazardous properties
  - Extra precautions, disinfection, or contamination response may be needed if a virus can live outside of a host or if a spilled material will remain dangerous after initial dispersal.

### Potential Crime Scene

- The event appears to be intentional
  - An act of biological terrorism or environmental sabotage may increase public panic and bring in multi-agency response from law enforcement, thus complicating local response.
- The incident was caused by gross negligence
  - Failure to follow best medical practices or routine maintenance on infrastructure may result in future legal involvement and a more complex, multi-agency response.

### Impact of Politics, External Factors, or Media

- There is a policy issue/controversy
  - If the proper response includes immunization, will groups oppose response? If the response includes pesticides, will groups oppose? Etc.
- There is an economic impact of action or non-action
  - Will you lose tourism by declaring an emergency? If you fail to act, will you endanger health or cast doubt on the safety of local businesses?
- Internal or external communication will have an impact on the event
  - Communications may be subject to CORA – will that impact the response? Will you need media cooperation to spread information about the event and your response?

### Area/Jurisdictional

- Multiple jurisdictions with conflicting interests are involved
  - The event may cross county lines, involve law enforcement from multiple jurisdictions, require interagency MOUs; this will increase complexity. Agencies involved may have competing priorities that must be negotiated.

### Available Resources/Responder Safety

- The local initial response is limited by resource availability
  - Insufficient personnel or supplies may elevate the response
- PH/LE is unwilling or unable to respond due to fatigue or magnitude of the event
  - Initial first responders are taxed by event and need outside resources
- The existing forces have been active for 72 hours without progress or improvement
  - While this may not be relevant at the beginning of an event, during subsequent operational periods, response may require more resources or support if the event is continuing unabated.

### Compliance/Enforcement Remedies

- The circumstances caused panicked, unpredictable human actions or response
  - Additional crowd support, communications, and law enforcement may be needed if an event creates a fearful populace.
- Isolation/Quarantine declaration & enforcement is required
  - If the event requires isolation/quarantine, complexity will be elevated due to legal implications as well as availability and willingness of law enforcement to participate.