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**NATIONAL HEALTHCARE COALITION  
PREPAREDNESS CONFERENCE**

*Visions of Progress: Sustainable Strategies for  
Emergency Preparedness & Resilience*

Presented By:



**MESH**

# Surge Scramble

Adapting CDC's Pan Flu Scramble to Six Functional MRSEs

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# Introduce the Pan Flu Scramble

- CDC activity to flood the community healthcare sector with patients represented by 5X7 cards

**#1**

**Emergency Department**

**Round 1**

- 8 month old female
- Temperature of 104°F (40°C)
- Increased work of breathing with retractions
- Poor muscle tone
- Cyanosis
- No previous medical history

Vital signs upon evaluation:

Temp–104°F, Pulse–130, Respiration–32, Blood Pressure–80/48

## Round 1

- Keep this patient for treatment
- Release this patient to go home
- Seek to transfer this patient to \_\_\_\_\_ who:
  - Accepts transfer request
  - Rejects transfer and returns patient to ED

## Round 2


- Keep this patient for treatment
- Release this patient to go home
- Seek to transfer this patient to \_\_\_\_\_ who:
  - Accepts transfer request
  - Rejects transfer and returns patient to ED

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Other Call Centers




9-1-1 Call Centers



Emergency Medical Services



ED/ICU



VA Medical Center/Clinic



Public Health Department




Facilitator



Home Care Site




Pharmacies



Fatality Management Services



Local Gov/ EMA/ EOC



Long -Term Care




Home Health/ Hospice Care



Urgent Care Centers



Outpatient Walk-in Clinics



Primary Care Providers

# Tasked with 2023/4 MRSE functional exercise

- Chemical Event (new annex)
- ASPR's evaluation tool
  - We needed to collect all that data
- Agencies present/invited
- Conducted a day after Symposium (focus on Chemical events)
  - Overview of Annex and Chempack program
  - Hazmat on-scene procedures
  - Treatment protocols for organophosphates



# PowerPoint with instructions

- 1.All your instructions will come from us. We'll project the scenario up on this PP
- 2.We are going to direct you to Victim Cards when it's time
- 3.Then we are going to give you time to process the incoming victims. But not too much time.
- 4.Then we'll stop the activity and check in with you as a large group and ask you to update your numbers. More to come
- 5.Then we'll ask lots of questions, some specifically aimed at hospitals and EMS, but others may be to the entire room
- 6.If you have an answer....raise your flag, pick up your microphone and wait to be called on



# Scenario

At approximately 9:00 AM, a chemical tanker truck carrying organophosphates overturned near a major intersection (90th and Dodge), leading to a catastrophic release of toxic chemicals. The incident has affected a hundreds of people in the vicinity, including pedestrians, motorists, and residents/occupants in nearby buildings as the plume drifts southeast. The following facilities are in the path





Emergency  
Medical Services



Hospital 1



Hospital 2



Public Health  
Department



Facilitator



Local Gov/  
EMA/ EOC



Long -Term  
Care



Home Health/  
Hospice Care



Outpatient  
Walk-in  
Clinics

# Items on each table



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20% of staffed beds and 85/15/rule


# Revised Patient Cards

**Emergency Department Victim Card**

1

Office on the web Frame

One adult victim, ages 20 to 35, arrives at your **Emergency Department** via ambulance with severe symptoms of Organophosphate poisoning.



**Symptoms**

- Seizures
- Loss of consciousness
- Excessive salivation and drooling
- Blurry vision
- Muscle weakness
- needs airway management (ventilator)


**Category** Severe: Admit to ICU

**Sector: Emergency Department Adult Victim Card**

1

Office on the web Frame

One Victim, 25-35 years old, arrives at your **Emergency Department** via ambulance, with moderate symptoms of Organophosphate poisoning



**Symptoms**

- Muscle twitching and fasciculations
- Nausea and vomiting
- Excessive sweating

**Category** Moderate: Admit to Med/Surg

**Sector: Emergency Department Adult Victim Card**

1

Office on the web Frame

One Victim, 25-35 years old, self-presents to your **Emergency Department** with mild symptoms of Organophosphate poisoning



**Symptoms**

- Muscle twitching and fasciculations
- Excessive sweating

**Category** Mild: Decon, Treat and Release

# Data collection forms for MRSE evaluation

## Healthcare Coalition Medical Response and Surge Exercise (MRSE)

Please answer all of the following questions. This data must be collected and reported to the Administration for Strategic Preparedness and Response (ASPR) in accordance with the Coalition’s funding guidelines.

**EMS agencies should complete the following questions based on your response to the scenario:**

- 1. Which EMS agency are you representing? \_\_\_\_\_
- 2. Please complete the following table at the beginning and end of the exercise to indicate the availability of EMS resources.

<b>Resource Type</b>	<b>Number available at beginning of functional exercise</b>	<b>Did your facility have enough to respond to the incident?</b>
Ground Ambulance (Basic Life Support)		
Ground Ambulance (Advanced Life Support)		
Hazmat Team		
Decontamination Team		
Specialized Protective Equipment		



# Data collection forms for MRSE evaluation

## Healthcare Coalition Medical Response and Surge Exercise (MRSE)

Please answer all of the following questions. This data must be collected and reported to the Administration for Strategic Preparedness and Response (ASPR) in accordance with the Coalition funding guidelines.

Hospitals should complete the following questions based on your facility’s response to the scenario:

1. **What is your hospital’s name?** \_\_\_\_\_
2. **Please use the following tables to record the availability of resources throughout the exercise:**

<b>Personnel Type</b>	<b>Total number available before exercise</b> (call your facility for this info at the beginning of the exercise).	<b>(end of exercise) Did you have enough to care for existing and surge patients?</b>	
Respiratory therapists		Yes	No
Pharmacists		Yes	No
Trauma, Emergency Department, and Perioperative Services Staff		Yes	No
Pediatrics, Neonatal, and Obstetric Services Staff		Yes	No
Laboratory and Diagnostic Imaging Services Staff		Yes	No
Environmental Services Staff		Yes	No
Clinical Supply Staff		Yes	No
Facilities and Information Technology Staff		Yes	No
Security Staff		Yes	No
<b>Resource Type</b>	<b>Total number available before exercise</b> (call your facility for this info at the beginning of the exercise).	<b>(end of exercise) Did you have enough to care for existing and surge patients?</b>	
Pressor Medications		Yes	No
Respiratory Medications		Yes	No
Anticonvulsant Drugs		Yes	No
Antidotes (e.g. Atropine, Hydroxocobalamin)		Yes	No
Intravenous Fluids		Yes	No
Oxygen		Yes	No
2-pam Chloride		Yes	No
Infusion Pumps		Yes	No
Ventilators		Yes	No
Bedside Monitors		Yes	No
Airway Suction (Adult & Pediatric)		Yes	No
Supplies Needed to Administer Pharmaceuticals, Blood Products		Yes	No

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# Data collection forms for MRSE evaluation

Bed Type	Number of open beds at the beginning of the exercise (call your facility for this information).	Did your facility have enough to respond to the incident?	
Emergency Department Beds		Yes	No
General Medical Unit Beds		Yes	No
ICU Beds (SICU, MISU, CCU)		Yes	No
Post Critical Care (Monitored/Stepdown) Beds		Yes	No
Surgical Unit Beds (Pre-op., Post-op., and Procedural)		Yes	No
General Pediatric Unit Beds		Yes	No
Pediatric ICU Beds		Yes	No

Please complete the following questions related to patient movement at the end of each round.

<b>Hospital Census at the beginning of the exercise</b>	
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Patient Movement	Number at end of exercise
Surge patients received and admitted	
Transfer patients received and admitted	
Number of existing patients discharged to accommodate surge	
Number of patient transferred to another facility to accommodate surge	
Number of existing and surge patients that did not receive an appropriate staffed bed at your facility and/or transport to another facility (i.e. patients awaiting admission)	



# Data collection forms for MRSE evaluation

Hospital Name:

Existing patients transferred out

Surge patients transferred out

Existing patients discharged



# Email sent before exercise

- Hospitals given a list of current day info needed based on HCC test objectives
  - Bed counts by type
  - Supplies on hand
  - Personnel on hand
- Instructed to bring phone numbers of colleagues at facility
- This becomes a functional exercise!



# Played 2 Rounds at 10% for each

- Experts in the room
- Updated tally/data collection sheets at the end of each round
- Reported out
  - First hospitals
  - Then all partners in room



# Evaluation Overview

- Participant feedback
- Healthcare Coalition Coordinator feedback
- Future considerations



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# Participant Feedback Collection Methods

## Healthcare Coalition Medical Response and Surge Exercise (MRSE)

Please complete the following questions as part of the Healthcare Coalition MRSE evaluation.

1. What is your organization? \_\_\_\_\_
2. Are you an executive for your organization? Yes No

Please fill in the bubbles below to indicate your level of agreement with each statement about the exercise objectives.

3. The Coalition engaged coalition members and their executives to participate in the MRSE and the After Action Review (AAR).

Strongly disagree     Disagree     Neutral     Agree     Strongly agree

4. The Coalition effectively notified members of the exercise and modeled how information sharing would be facilitated during a community-wide emergency or disaster.

Strongly disagree     Disagree     Neutral     Agree     Strongly agree

5. The Coalition demonstrated its ability to assess and meet the critical personnel and resources needs (supplies, personnel, etc.) to manage a patient surge during a community wide emergency or disaster.

Strongly disagree     Disagree     Neutral     Agree     Strongly agree

6. The Coalition exhibited its ability to assess and meet the critical EMS personnel and resource needs to manage patient surge during a community-wide emergency or disaster.

Strongly disagree     Disagree     Neutral     Agree     Strongly agree

7. The Coalition displayed its ability to reduce patient morbidity and mortality through appropriate patient placement during a large-scale patient surge by assisting with the identification and coordination of available patient care resources.

Strongly disagree     Disagree     Neutral     Agree     Strongly agree

8. The Coalition showcased its ability to successfully coordinate and execute all relevant response plans during a community-wide emergency or disaster.

Strongly disagree     Disagree     Neutral     Agree     Strongly agree

9. The MRSE evaluated the readiness and response capabilities of hospitals in handling a mass casualty event caused by chemical contamination.

Strongly disagree     Disagree     Neutral     Agree     Strongly agree

# Participant Feedback Collection Methods

10. The MRSE assessed the coordination and communication among the HCC, healthcare facilities, first responders, and public health agencies.

Strongly disagree     Disagree     Neutral     Agree     Strongly agree

11. The MRSE determined the ability of hospitals to surge by at least 20% of their staffed beds and initiate Crisis Standards of Care.

Strongly disagree     Disagree     Neutral     Agree     Strongly agree

12. The MRSE identified areas for improvement in the emergency response plan and resource allocation during a chemical incident.

Strongly disagree     Disagree     Neutral     Agree     Strongly agree

**Please fill in the bubbles below to indicate your agreement with each question in relation to the format of this exercise.**

13. The Scramble (in-person functional exercise with an opportunity to discuss between rounds of events) is an effective format for the MRSE.

Strongly disagree     Disagree     Neutral     Agree     Strongly agree

14. The 20% staffed bed surge was an effective number of patients to test the exercise objectives.

Strongly disagree     Disagree     Neutral     Agree     Strongly agree

**Please answer the following questions and consider the exercise format and design, the scenario, the events that played out during the exercise, and the actions of exercise participants.**

15. What is one area for improvement from your participation in the MRSE?

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16. How do you think the area for improvement from question #15 could be addressed?

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17. What is one strength you identified playing in the MRSE?

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# Participant Feedback Collection Methods

- Hot wash
  - What went well with exercise operations?
  - What could be improved with exercise operations?
  - What went well with exercise design?
  - What could be improved with exercise design?



# Participant Feedback Average Ratings

Agency	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	# of Respondents	
Emergency management	4.50	4.00	4.50	4.00	4.00	4.00	4.00	4.00	4.50	4.00	4.50	4.50	4.50	2
EMS	4.83	4.72	4.83	4.56	4.22	4.22	4.67	4.50	4.11	4.22	4.39	3.94	7	
Hospital	4.62	4.56	4.48	4.34	4.31	4.47	4.52	4.49	4.37	4.54	4.56	4.15	121	
Long term care	4.36	4.42	4.31	4.32	3.96	4.26	4.24	4.10	4.42	4.20	4.65	4.10	19	
Public health	4.39	4.48	4.25	4.00	4.24	4.19	4.19	4.07	4.08	4.38	4.30	3.74	23	
Other	4.41	4.47	4.37	4.32	4.28	4.34	4.36	4.36	4.14	4.30	4.28	4.11	47	
Composite	4.52	4.44	4.46	4.26	4.17	4.25	4.33	4.34	4.19	4.36	4.45	4.09	219	

Highest Average by Organization Type

Lowest Average by Organization Type

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# Participant Feedback Average Ratings - Highest

Agency	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	# of Respondents	
Emergency management	4.50	4.00	4.50	4.00	4.00	4.00	4.00	4.00	4.50	4.00	4.50	4.50	4.50	2
EMS	4.83	4.72	4.83	4.56	4.22	4.22	4.67	4.50	4.11	4.22	4.39	3.94	7	
Hospital	4.62	4.56	4.48	4.34	4.31	4.47	4.52	4.49	4.37	4.54	4.56	4.15	121	
Long term care	4.36	4.42	4.31	4.32	3.96	4.26	4.24	4.10	4.42	4.20	4.65	4.10	19	
Public health	4.39	4.48	4.25	4.00	4.24	4.19	4.19	4.07	4.08	4.38	4.30	3.74	23	
Other	4.41	4.47	4.37	4.32	4.28	4.34	4.36	4.36	4.14	4.30	4.28	4.11	47	
Composite	4.52	4.44	4.46	4.26	4.17	4.25	4.33	4.34	4.19	4.36	4.45	4.09	219	

**Question 1:**The coalition engaged coalition members and their executives to participate in the MRSE and After Action Report.

**Question 2:** The coalition effectively notified members of the exercise and modeled how information sharing would be facilitated during a community-wide emergency or disaster.

**Question 3:** The coalition demonstrated its ability to assess and meet the critical personnel and resource needs (supplies, personnel, etc.) to manage a patient surge during a community-wide emergency or disaster.

**Question 11:** The Scramble (in-person functional exercise with an opportunity to discuss between rounds of events) is an effective format for the MRSE.

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# Participant Feedback Average Ratings - Lowest

Agency	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	# of Respondents	
Emergency management	4.50	4.00	4.50	4.00	4.00	4.00	4.00	4.00	4.50	4.00	4.50	4.50	4.50	2
EMS	4.83	4.72	4.83	4.56	4.22	4.22	4.67	4.50	4.11	4.22	4.39	3.94	7	
Hospital	4.62	4.56	4.48	4.34	4.31	4.47	4.52	4.49	4.37	4.54	4.56	4.15	121	
Long term care	4.36	4.42	4.31	4.32	3.96	4.26	4.24	4.10	4.42	4.20	4.65	4.10	19	
Public health	4.39	4.48	4.25	4.00	4.24	4.19	4.19	4.07	4.08	4.38	4.30	3.74	23	
Other	4.41	4.47	4.37	4.32	4.28	4.34	4.36	4.36	4.14	4.30	4.28	4.11	47	
Composite	4.52	4.44	4.46	4.26	4.17	4.25	4.33	4.34	4.19	4.36	4.45	4.09	219	

**Question 5: The coalition displayed its ability to reduce patient morbidity and mortality through appropriate patient placement during a large-scale patient surge by assisting with the identification and coordination of available patient care resources.**

**Question 12: The 20% staffed bed surge was an effective number of patients to test the exercise objectives.**



# Coalition Coordinator Feedback

- Level of agreement with each statement:

1. The 20% surge of hospital staffed beds effectively tested the HCC's response plans.
2. The 85/15 rule (85% of patients are treat and release, 15% are critical and require admission) was an effective format for the severity of the patients.
3. The patient cards were an effective way to simulate patients for the in-person functional MRSE.
4. The hospital data collection forms were an effective tool to collect the required data for ASPR.
5. The EMS data collection forms were an effective tool to collect the required data for ASPR.
6. Partnering the Symposia and MRSE was an effective way to engage members and provide education on emergency preparedness topics.
7. I felt engaged during the MRSE planning process.
8. The MRSE helped meet the coalition and partner's emergency preparedness needs.
9. The topic (chemical) of the MRSE was a good topic for a surge exercise.
10. The facilitation of the MRSE was engaging and effective.
11. The in-person functional, as opposed to a functional with a Simulation Cell, was a good format for the MRSE.



# Coalition Coordinator Feedback

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Number of Respondents
3.6	4	4.4	5	4.2	5	4.8	4.8	4.2	4.8	4	5

1. The 20% surge of hospital staffed beds effectively tested the HCC's response plans.
4. The hospital data collection forms were an effective tool to collect the required data for ASPR.
6. Partnering the Symposia and MRSE was an effective way to engage members and provide education on emergency preparedness topics.





# Participant Exercise Design Themes

Good:

- Diversity of Attendees
  - Networking
  - Brainstorming
  - Engagement
  - Collaboration
- Room setup
  - Microphones
  - Homogenous tables
- Patient cards
  - Cards themselves
  - Envelopes – “the unknown”
- Real-time information



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# Participant Exercise Design Themes

## Areas for Improvement:

- Hospital-centric
  - Disengaged: LHD, LTC, non-hospital healthcare
- Attendees
  - **Needed:**
    - **EMS**
    - **Emergency management**
    - Hospital
      - Clinical
      - Administration
  - Desired:
    - Law enforcement
    - Dispatch
    - Weather service



# Participant Exercise Design Themes

## Areas for Improvement:

- Introductions
- Room setup
  - Homogenous tables
- Surge not stressful
- Scenario
  - Chemical
  - On-scene details
- Exercise run time



# Future Considerations

- EMA and EMS participation
  - Survey, discussion if unable to attend
- More surge
  - >20% (if using 85/15)
  - Time of year
  - Patient acuity
- Scenario:
  - Not chemical
  - More details for first responders
  - Recovery
    - Public health activities
    - Prolonged stress
      - Length of patient stay on card
- Inject: Non-hospital healthcare needs patients
- Test the information-sharing system
- Fewer objectives



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Thank you!

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