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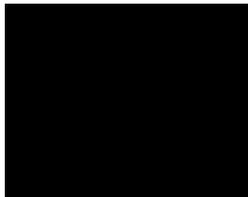
# **Report on Exercise Typhon Public Health England Command Post Exercise 22 and 23 February 2017**

[Images removed under  
Section 40 of the FOI Act]

## The report on Exercise Typhon

Exercise Typhon was a command post exercise held on 22 and 23 February 2017 to review the effectiveness of Public Health England’s National Incident & Emergency Response Plan during two concurrent enhanced incidents. The exercise was part of the Public Health England funded programme directed by the Emergency Preparedness, Resilience and Response Partnership Group chaired by the Department of Health.

The exercise explored the roles and responsibilities of PHE in response to a major chemical incident and a confirmed positive case of a Viral Haemorrhagic Fever. Exercise Typhon was the first opportunity for Public Health England to conduct an internal ‘PHE-only’ command post exercise and it is suggested that the lessons identified in this report are correlated with those from the Exercise Cygnus (the DH led Tier 1 pandemic influenza command post exercise held in October 2016) and Exercise Leopold (the PHE led VTEC E.coli O104 table-top exercise held in September 2016).



Interim Head of Emergency Response Department  
Interim Director Emergency Preparedness Resilience and Response

08 May 2017

## Executive summary

As part of Public Health England’s ongoing preparedness and response assurance framework, its Emergency Response Department was tasked to design and deliver an exercise to assess PHE’s National Incident & Emergency Response Plan, which was updated in October 2016.

Exercise Typhon was a command post exercise based on two fictional scenarios: a major Toxic Industrial Chemical fire and a confirmed case of a Viral Haemorrhagic Fever. The scenarios were designed to escalate from an initial local response (a standard response) to one that required national coordination (an enhanced response). The purpose of the exercise was to assess Public Health England’s capacity to respond to two concurrent enhanced level incidents and Exercise Typhon provided detailed evidence of assurance that Public Health England would remain effective in such circumstances. The exercise did, however, highlight several areas for improvement, which are captured in 14 lessons identified. In summary the key findings are:

- Further clarity is required on the role and responsibilities of the Strategic Director, the Incident Director and the Local Director, including how these key decision-makers work together to achieve a joint understanding of PHE’s response risks.
- Further clarity is required on the criteria for the escalation from a standard to an enhanced response.
- The processes and procedures for command, control and situational awareness as outlined in the National Incident & Emergency Response Plan need to be reinforced through further training and exercises.

A full list of the lessons identified is included at **Appendix A**

The Emergency Response Department would like to thank our Subject Matter Experts who provided expert input in to the design and delivery of the exercise;

[REDACTED]

# 1. Introduction

Public Health England’s (PHE) Concept of Operations (CONOP)<sup>1</sup> and its supporting National Incident and Emergency Response Plan<sup>2</sup> (NIERP) were updated in October 2016 to incorporate the lessons identified from PHE’s extensive response to the 2014 Ebola Virus Disease. A material change was the introduction of a revised incident response level matrix that replaced the Level 1 to 4 approach with a standard and enhanced classification. This is defined in the NIERP as follows;

<i>Standard</i>	<ul style="list-style-type: none"> <li>- Local leadership arrangements with incident management team and incident director:</li> <li>- No enhanced national Incident leadership</li> <li>- May require support from a PHE specialist service such as NIS, FES, CRCE, ERD</li> <li>- Liaison with relevant external bodies as required eg: NHS, FSA, EA, DEFRA</li> </ul>
<i>Enhanced</i>	<ul style="list-style-type: none"> <li>- National leadership arrangements with national command and control</li> <li>- Will require support from a PHE specialist service such as NIS, FES, CRCE, ERD</li> <li>- Liaison with relevant external bodies as required eg: NHS, FSA, EA, DEFRA</li> </ul>

Exercise Typhon was designed to explore the challenges likely to arise for PHE as a result of two concurrent fictional scenarios of a major Toxic Industrial Chemical (TIC) fire at a Control Of Major Accidental Hazard (COMAH) site in the West Midlands and a confirmed positive case of Viral Haemorrhagic Fever (VHF). The two scenarios were designed to start as being appropriate to a standard response, which then escalated to two concurrent enhanced incidents. The scope of the exercise did not include an in-depth exploration of aspects relating to recovery and the return of services to the new normality across PHE.

The agreed exercise concept was that it should be an internal command post exercise for PHE participants only and that all supporting multi-agency partners, including health, were simulated by Subject Matter Experts based in exercise control (EXCON).

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<sup>1</sup> PHE CONOP version 02.00 dated October 2016

<sup>2</sup> PHE NIERP version 02.00 dated October 2016

## 2. Aim and Objectives

### 2.1 Aim

The aim of Exercise Typhon was to assess Public Health England's capacity to respond to and manage two concurrent enhanced level incidents.

### 2.2 Objectives

1. To assess the incident response procedures detailed with PHE's National Incident and Emergency Response Plan.
2. To confirm the role of the Strategic Director, the Incident Director and the Local Incident Director.
3. To confirm the internal communication processes between the Strategic Director / Strategic Response Group, Incident Director / National Incident Co-ordination Centre and the Local Director / Incident Co-ordination Centres in Centres and PHE specialist services.
4. To assess PHE's processes to provide effective specialist advice and messages to the public, health professionals and organisations during a response.
5. To explore PHE's mutual aid and business continuity arrangements whilst responding to and managing two concurrent enhanced level incidents.

## 3. Conclusions

Exercise Typhon was the first opportunity for Public Health England to exercise its response arrangements in an 'internal, PHE only' exercise, and was well received by the participants who enthusiastically engaged with both scenarios throughout the exercise.

The opportunity to assess Public Health England's capacity to respond to and manage two concurrent enhanced level incidents was welcomed and the participants agreed that the NIERP would benefit from amendment. The key findings included that further clarity is required on the role and responsibilities of the Strategic Director, the Incident Director and the Local Director, including how these key decision-makers work together to achieve a joint understanding of PHE's response risks. Further clarity is also required on the criteria for the escalation from a standard to an enhanced response and that the processes and procedures for command, control and situational awareness as outlined in the NIERP need to be reinforced through further training and exercises.

The majority of the participant feedback suggested that they felt the exercise was a valuable experience and that the two scenarios allowed participants to work through operational

elements as well as to inform useful areas of discussion. The lessons identified from Exercise Typhon should be used to inform and guide the future development of PHE's preparedness and response arrangements.

## Appendix A – Lessons Identified

<b>Obj 1: To assess the incident response procedures detailed within PHE’s NIERP</b>	
LI 1	Further clarity is required in the NIERP on the criteria for the escalation from a standard to an enhanced response. This decision must be effectively communicated and formally logged.
LI 2	The NIERP would benefit from the inclusion of more detail on the process of the communications and situational updates to be used during a standard response.
LI 3	The Information and guidance provided in the NIERP needs to be consistent throughout.
LI 4	The standing agendas and meeting templates for the SRG would benefit from further review to ensure that meetings are time-efficient.
<b>Obj 2: To confirm the role of the Strategic Director, Incident Director and the Local Incident Director</b>	
LI 5	Further clarity is required on the role and responsibilities of the Strategic Director, the Incident Director and the Local Director. In particular, the NIERP would benefit from outlining how these key decision-makers work together to achieve a joint understanding of PHE’s response risks.
LI 6	Senior leaders who might potentially fill the role of Strategic Director and/or Incident Director would benefit from additional role specific training.
LI 7	When the Strategic Director and/or Incident Director is not available, then a deputy needs to be nominated.
<b>Obj 3: To confirm the internal communication processes between the Strategic Director / SRG; National Incident Director / NICC and the Local Incident Director Local ICCs in Centres and PHE specialist services</b>	
LI 8	The processes and procedures for communications and situational awareness as outlined in the NIERP need to be reinforced through training and exercises.
LI 9	During an incident, the response structure that PHE has established needs to be communicated.
LI 10	In order to ensure shared situational awareness across PHE of a nationally coordinated enhanced response, an information cascade process, (similar to the NSAC or perhaps the use of Resilience Direct) should be considered.
<b>Obj 4: To assess PHE’s processes to provide effective specialist advice and messages to the public, health professionals and organisations during a response.</b>	
LI 11	The process to access existing specialist guidance needs to be better understood; perhaps this should be included in the NIERP or the specific threat/hazard plan.
LI 12	The NIERP would benefit from further clarification on the roles and responsibilities of the public messaging communications lead for a standard and enhanced response.

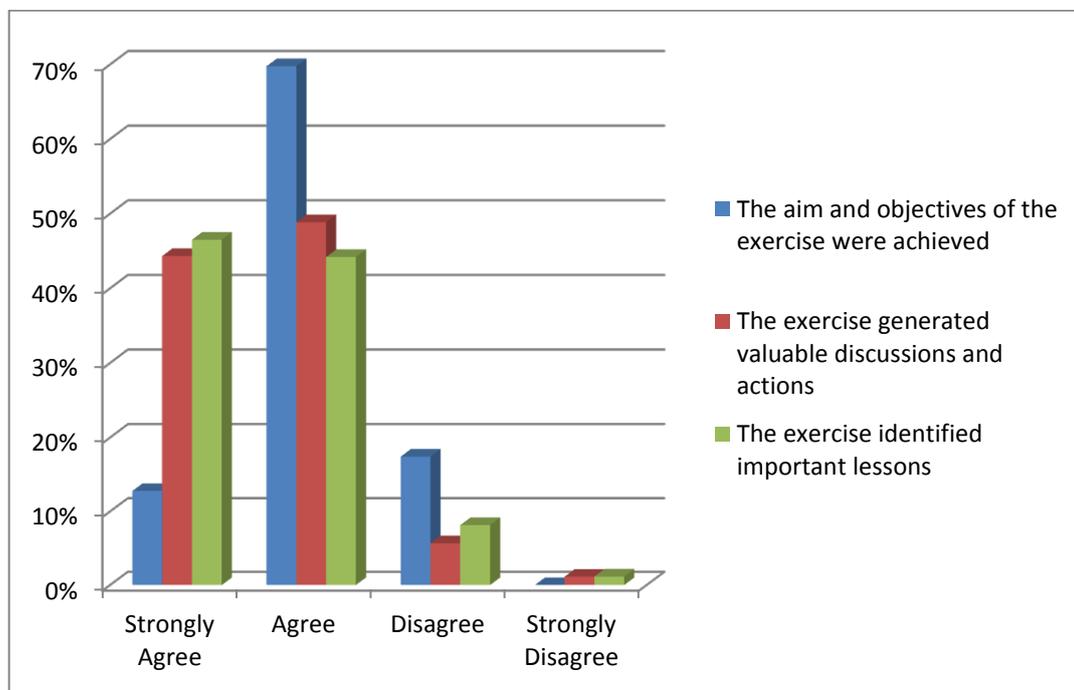
<b>Obj 5: To explore PHE’s mutual aid and business continuity arrangements whilst responding and managing two concurrent enhanced level incidents</b>	
LI 13	The concept of the CROC would benefit from further development and the outline plan should be included in either the NIERP or PHE’s Business Continuity Management System.
LI 14	PHE’s Business Continuity Management System would benefit from the inclusion of a common definition of mutual aid and specialist support.

## Appendix B - Participant Feedback

Over the two days, 184 PHE personnel took part in Exercise Typhon. This comprised 161 participants, 13 exercise controllers & evaluators and 10 members of exercise control. Feedback on the exercise was received from 88 participants (55%) and is displayed below.

Feedback from participants confirmed they felt the exercise was a valuable experience and the two exercises combined allowed participants to work through operational elements as well as to inform useful areas for discussion. However, 17% Disagreed that the aim and objectives of the exercise were achieved and further analysis suggests that this unusually high Disagree figure was due to those exercise participants that were only able to attend on Day 1.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Did Not Answer
The aim and objectives of the exercise were achieved	<b>13%</b>	<b>70%</b>	<b>17%</b>	<b>0%</b>	<b>0%</b>
The exercise generated valuable discussions and actions	<b>44%</b>	<b>49%</b>	<b>6%</b>	<b>1%</b>	<b>0%</b>
The exercise identified important lessons	<b>47%</b>	<b>44%</b>	<b>8%</b>	<b>1%</b>	<b>0%</b>



## Glossary

ACDP	Advisory Committee for Dangerous Pathogens
BCP	Business Continuity Plan
COMAH	Control of Major Accidental Hazards
CROC	Centre Regional Operational Cell
CRCE	Centre for Radiation Chemicals and Environment
EPRR	Emergency Preparedness, Resilience and Response
ERD	Emergency Response Department
EXCON	Exercise Control
HCID	Highly Contagious Infectious Disease
HLIU	High Level Isolation Unit
HPT	Health Protection Team
ICC	Incident Co-ordination Centre
ID	Incident Director
IFS	Infectious Fever Service
IMT	Incident Management Team
LID	Local Incident Director
NHS	National Health Service
NIERP	National Incident Emergency Response Plan
NICC	National Incident Co-ordination Centre
NIMT	National Incident Management Team
NSAC	National Situational Awareness Cell
RVI	Royal Victoria Infirmary
SCG	Strategic Co-ordinating Group
SD	Strategic Director
SID	Strategic Incident Director
SRG	Strategic Response Group
STAC	Scientific and Technical Advice Cell
VHF	Viral Haemorrhagic Fever

## Disclaimer

The exercise scenario is entirely fictional and is intended for training and exercise purposes only. The exercise report is provided by Public Health England and is subject to © Crown Copyright 2017.

This report has been compiled from the comments made by the participants during the exercise and the observations of facilitators and note takers. The report's author has tried to assimilate this information in an impartial and unbiased manner to draw out the key themes and lessons: the report is not a verbatim account of the exercise. The report has been quality checked by the senior management within PHE's Emergency Response Department before being released.

The lessons identified in this report are not necessarily PHE's corporate position; they are evidenced on the information gathered at the exercise, the structured debrief and interpreted in the context of ERD's experience and judgement. It is suggested that the lessons identified are reviewed by the appropriate organisations to assess if any further action is required.

## Report Distribution

This report will be made available to all registered exercise participants and a summary version will be available via the ERD Exercises Team's Resilience Direct site.

## Continuing Professional Development

Exercise Typhon has been accredited by the CPD Certification Service as being eligible for Continuing Professional Development within the framework of the following national occupational standards:

SFJCCAE1: Create exercises to practice or validate emergency or business continuity arrangements

SFJCCAE2: Direct and facilitate exercises to practice or validate emergency or business continuity arrangements



A certificate confirming the award of CPD points will be sent to each registered exercise participant.