Exercise Artemis Report
Command Post Exercise
10 September 2013

Contents

Executive summary

Exercise ARTEMIS was a one-day command post exercise for the European Centre for Disease Prevention and Control (ECDC) and was conducted by Public Health England under a framework service contract. Exercise ARTEMIS was held at ECDC on 10 September 2013 and was designed to provide an opportunity to evaluate and develop preparedness for public health events.

The main purpose of the exercise was to provide ECDC staff with the opportunity to use and implement the revised Public Health Emergency Operational Plan, and to test supporting documents, tools and templates in response to two overlapping public health emergency scenarios. This opportunity enabled ECDC staff to test existing plans and procedures, to improve and reinforce preparedness and resilience, to clarify roles and responsibilities during response, and to identify gaps in current response arrangements.

The exercise also built on lessons learned from Exercise Beavi which was held in 2012, and from real incidents such as the recent outbreak of avian influenza A (H7N9) which involved activation of the PHE system. Exercise ARTEMIS offered an opportunity for participants to interact and increase their understanding of the roles and responsibilities in the strategic management of an international outbreak.

Participants in the exercise were ECDC personnel who would have a role in a PHE response. The exercise was designed, delivered and evaluated by the Exercises team from the Emergency Response Department at Public Health England with support from colleagues at ECDC.

Overall, it can be said that the outcomes from the simulation exercise demonstrated an effective, well-functioning Public Health Emergency response system. The people in key positions were well acquainted with their roles and responsibilities, and decisions and taskings were made in an efficient way. However, the management structure could be strengthened by having additional deputy roles to support some of the key roles/functions. The exercise also identified that some Standard Operating Procedures(SOPs) and Job Action Sheets(JAS) require further improvement to ensure clarification and best practice and that further development and refinement of PHE tools and systems is necessary.

Feedback from Exercise ARTEMIS indicated that there is a requirement for:

- ## PHE 'Upgrade kit' for out of hours activation

During out of hours the instruction and communication cascade for activation of a public health emergency response is very unclear and needs clarifying. A PHE upgrade kit would assist the out of hours Duty Officer in the decision making process. This upgrade kit could constitute a set of procedures and contact numbers enabling the necessary meeting to be rapidly convened and the decision to upgrade to be taken outside of normal office hours.

- ## A clear cascade of responsibilities

Some key functions and decisions within ECDC's PHE system seem to be based on specific individuals rather than on generic roles. The cascade of responsibility for these did not appear to be clear in a situation where one or more of these individuals might be unavailable. This situation could be alleviated by an agreed cascade of responsibility and, for resilience it is recommended that there are three levels to this cascade (i.e. post holder, deputy and second line deputy)

- ## Review the number of meetings and provide additional staff with decision-making authority

The absence of key individuals for tasking and decision making was noted as an issue that caused delay in the information flow, when these key individuals were not available or were occupied in meetings. The number of meetings in the PHE management system (daily staff rhythm) makes it difficult for actions to be undertaken and for information and communication to take place both internally and externally. Two possible solutions are to review the number of meetings required, and to provide additional support to those key individuals. The support would be in the form of deputies who are empowered to make decisions and can do this while the key individuals are in meetings or who could attend the meetings in their place.

- ## SOPs to be simplified and/or amalgamated

A significant amount of work has been spent successfully improving the SOPs since the last exercise. However, some are still very long and detailed and further work is required to shorten/ amalgamate/ simplify these. Player feedback also highlighted the need for better communication about what SOPs and templates are available and how these are accessed in the PHE Intranet and Document Management System (DMS).

- ## Further work to enhance IT/Systems & Tools

PHE Intranet: A lot of work has gone in to improving the PHE Intranet and participants agreed that this is a very useful tool and works very well. It was acknowledged that the combination of the PHE Intranet with ECDC's new Document Management System has

significantly improved situational awareness. Further work is now needed to provide ongoing and continuous improvement and better integration with other systems.

Consideration should be given to the further development of ECDC's IT strategy to include additional tools that might be used in PHE response. This could include a rolling text update in order to have a clear and immediate vision of the situation status during a PHE response. This strategy should also consider how tools such as the i-Pad can work for a PHE and the development of a mobile phone App so that out of hours staff could access all the necessary information required for PHE activation.

- ## Communications that are timely and clear

External communications: Crisis communications need to be clear and timely to sustain trust and confidence among the public. To assist the production of a coherent rapid holding line statement in emergency situations, it is recommended that a template is developed to support the development of an early holding line statement. In addition, pre-prepared messages for the public and Q&A disease factsheets could be prepared in advance and stored on the website for access during an incident response.

Internal communications: The management of internal communications during a public health emergency response should also be reviewed, developed and practised to ensure all staff are able to have rapid access to and use of current information.

Future exercises

Previous exercises have considered all aspects of PHE response which is very difficult to cover in one day. In addition, some SOPs are clearly functioning very well and some roles and responsibilities are clearly understood. It may not be necessary in future exercises to test these but instead the exercise could focus on those parts of the PHE response that are less exercised and those areas that have been less challenged.

Detailed findings from the exercise can be found at **Appendix A**.

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1.   Introduction

1.1   Exercise ARTEMIS was a one day simulation command post exercise (CPX) for the European Centre for Disease Prevention and Control (ECDC), designed to provide ECDC staff with the opportunity to use and implement the Public Health Emergency Operational Plan (PHE OP), and to test supporting documents, tools and templates. The exercise was conducted by Public Health England[1] (formerly the Health Protection Agency) under a framework service contract to ECDC.

1.2   ECDC's Public Health Emergency Operating Plan and associated Standard Operating Procedures (SOPs) were developed during 2011 – 2012, and tested during Exercise BEAIVI in May 2012. The PHE OP and SOPs were revised and updated and Exercise ARTEMIS provided a further opportunity to test the functionality and operability of these plans and procedures and ECDC's management structure during a PHE. It also helped to increase staff knowledge of the PHE concept, procedures and command structures.

1.3   Exercise ARTEMIS was originally planned for delivery in April 2013 but due to ECDC's involvement in the avian influenza A(H7N9) in China, the exercise was postponed until September 2013.

1.4   This report aims to evaluate the PHE systems and procedures used in the exercise and the roles and responsibilities of ECDC staff in a PHE, and to make recommendations as to how these activities could be further improved. These recommendations are listed at **Appendix A**.

2.   Scenario

The scenarios were designed to activate a PHE Level 1 response and to allow the ECDC management team to consider how they would respond to two public health emergencies at the same time. Exercise ARTEMIS was based on two scenarios:

a) the first scenario involved cases of Ebola in France and Belgium. Following a trip to the Ivory Coast, an Ivorian living in Paris was admitted to hospital with viral haemorrhagic

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[1] To avoid any confusion, Public Health England will not be abbreviated to PHE in this report. PHE here refers to Public Health Emergency

fever. He was also a known drug user and shared needles. Two further cases were later reported in France, followed by two suspected cases in Belgium. All cases were linked through personal association with the initial case and with travel to the Ivory Coast. An additional possible health threat was included with the suggestion of bushmeat being brought back into the European Union for consumption. A final suspected case (a paramedic who attended the initial case) in France was included to raise fears of person to person transmission.

b) The second scenario was based on an environmental issue with a potential public health impact. An algal bloom on the Adriatic Coast caused significant health concerns in Italy, Slovenia and Croatia. Reports in the media elevated public anxiety and a request for assistance from Slovenia was made to ECDC.

3.   Aim and objectives

3.1   Aim

The aim of the exercise was to provide ECDC staff with the opportunity to use and implement the PHE Operational Plan and to test supporting documents, tools and templates.

3.2   Objectives

a) to increase the knowledge of the PHE concept, procedures and command structure

b) to familiarise ECDC staff with their roles and responsibilities during a PHE

c) to identify any gaps in PHE response arrangements

4.   Exercise design

4.1   The work package for the exercise consisted of two components. The first was a one day command post exercise which was delivered from a central exercise control located at ECDC. The exercise started at 08:00 CEST and was conducted in real time until 15:30 CEST, when a single time jump of two weeks was introduced to enable a consideration of the recovery phase. The exercise finished around 16:30 CEST.

The second part was an evaluation workshop which was held at ECDC on 23 September 2013 and is described in Section 5 of this report.

4.1.2   This internal exercise was designed to replicate a real life PHE as closely as possible. Players were expected to follow the revised PHE OP (version 7.0), associated SOPs and templates and use existing methods of working and communications in order to respond to the exercise scenarios.

4.1.3   Information for player response was provided by emails replicating the Early Warning & Response System (EWRS) as well as emails and telephone calls replicating contact from external agencies and pseudo media. Hard copies of simulated social media and news reports were also provided to the ECDC communications players.

4.1.4   Exercise Control played the part of any organisation or agency external to ECDC. The organisations represented in Exercise ARTEMIS included the World Health Organization (WHO), the Directorate General for Health and Consumers (DG SANCO) and the Ministries of Health of selected European Union Member States.

4.1.5   On the day preceding the exercise, participants were briefed on how the exercise would run and how they would be engaged in the exercise. During the exercise, participants were also invited to observe the senior management team meetings held in the Internal Decisions Room via a video link to the Board Room. The majority of participants stated that the briefings were very useful and that observing the meetings presented an interesting learning opportunity and helped develop understanding of the PHE management structure and decision-making process.

4.1.6   Delivery of the exercise material was via pre-prepared paper and messaging injects, emails and telephone calls.

4.1.7   The structure for Exercise ARTEMIS was based upon the ECDC PHE management structure and is shown at **Appendix B**.

4.2   Participant Groups

4.2.1   A list of participants in Exercise ARTEMIS and in the post-exercise evaluation workshop is shown at **Appendix C**. To ensure maximum participation in the exercise, players in the exercise were pre-identified and notified.

4.2.2   Subject Matter Experts (SME) and external organisations and agencies, including Member States, were simulated by Exercise Control. There was no external 'live' play. As noted above, the organisations represented during the exercise included WHO, DG SANCO and Ministries of Health from France, Belgium, Italy, Slovenia and Croatia. Pseudo Media Exercise Control also replicated queries from external press agencies and media.

4.3   Timeline of the simulation exercise

To set the initial scene, a ProMed report was tabled at the Round Table meeting on   9 September 2013, with details of an outbreak of Ebola in the Ivory Coast. This was for information only and no further action was required.

Initial injects with more information from the scenario were sent by email to the EI Duty Officer and to the Communications team. These messages were sent outside of ECDC's normal working hours: one was an Early Warning & Response System (EWRS) message confirming a case of Ebola in an Ivorian man living in France; the other messages included simulated media reports, Twitter feeds and Press statements from WHO and the French Ministry of Health (MoH).

On the morning of 10 September, an update from the French MoH announced the death from Ebola of the initial case, and provided news of further suspected cases in France. Additional pressure was then made on ECDC by telephone requests from DG SANCO (played by Exercise Control) for information.

A further telephone request from DG SANCO (played by Exercise Control) was made to the Director of ECDC for a teleconference with ECDC and the Ministry of Health, France. DG SANCO also requested that ECDC provide a Rapid Risk Assessment on the Ebola cases.

Challenges were made throughout the morning to the Communications Team by requests from DG SANCO (simulated play) and from Pseudo Media.

Notification by EWRS from a second Member State - the Ministry of Health, Belgium - was received regarding two suspected cases of Ebola in Brussels with known travel to the Ivory Coast.

At 11:00 CEST, at the ECDC daily Round Table meeting, a ProMed report detailing an algal bloom and possible water contamination on the Adriatic Coast was submitted. This was followed by further injects to the EI Duty Officer regarding reports of large numbers of people suffering from breathing difficulties and skin irritation after swimming in the sea in Italy, Slovenia and Croatia.

In France, the Ministry of Health reported on the paramedic who attended the initial case of Ebola, being admitted to hospital with flu-like symptoms, to raise the question of whether this was via person to person transmission.

Requests were made to ECDC from Slovenia for technical assistance and communications advice; and from WHO for an Outbreak Assistance Team to travel to the Ivory Coast to support the outbreak and control team there.

A PHE Management Team Meeting was held to consider the impact of responding to two emergencies. After this meeting, a time jump of two weeks was introduced into the exercise to enable participants to consider in their functional groups the processes around de-escalation and recovery.

A hot de-brief was held at the end of the exercise and participants were encouraged to feedback their experiences from the day.

5. Exercise evaluation

5.1 Evaluation methodology

The exercise was evaluated against the aim and objectives and is based upon the following:

a) Outputs from the exercise: emails, press releases, decisions, taskings from meetings, situation reports, minutes of meetings and postings on the PHE intranet

b) Evidence was gathered from the following sources to inform this report:

   i.   Emails generated by the players were copied to the Exercise Control email accounts and evidence from these has been used to inform the evaluation

   ii. Player workbooks – players were provided with workbooks in order to allow them to evaluate for themselves how useful the tools and templates were; how clearly they understood their roles and responsibilities; and to identify areas for improvement

   iii. Player feedback forms – feedback forms were included in the workbooks for individuals to provide their own personal feedback

   iv. Hot Debrief – at the end of the exercise, the functional groups were asked to nominate a spokesperson to feed back their key learning points and issues experienced during the exercise. In addition, the Director of ECDC also provided feedback from the experiences of the Senior Management Team

v. ECDC Evaluator – the Evaluator appointed by the ECDC Senior Management Team to perform the internal evaluation of the PHE response also provided a report to the Exercise Manager to inform the final report

vi. Public Health England Evaluators – an experienced team of evaluators from Public Health England attended the exercise and recorded their observations in a report and provided feedback to the Exercise Manager.

vii. Cold Debrief – in addition to the material and data collated from the day of the exercise itself, all participants were invited to attend the post-exercise workshop on 23 September 2013. This was held at ECDC and a programme for discussion of the feedback from the exercise was provided along with an opportunity to identify gaps and areas for improvement in the PHE response. The workshop was attended by 23 delegates and was divided into three sessions:

- o First session: Evaluator feedback
  Feedback from observations of the exercise activity from the Public Health England evaluation team and from the ECDC Evaluator

- o Second session: Group work
  Participants worked in their functional groups to consider their experiences during the exercise

- o Third session: Group feedback
  Participants provided feedback in a plenary session on observations from the exercise activity, roles, tools and templates used, and agreed recommendations for enhanced PHE response arrangements and to address some of the challenges faced during the exercise. These outputs have been used to inform this report.

5.2   Exercise constraints

5.2.1   The exercise imposed a level of constraint upon the participants. The most significant of these have been taken into account during the evaluation process. The main constraints for Exercise ARTEMIS were:

a) Time: Exercise ARTEMIS was a one day simulation command post exercise and in order for the participants to experience a fully developed PHE in nine hours this

meant that time pressures had to be introduced. It is therefore acknowledged that many actions and decisions would have been carried out over a much longer period of time than was experienced during the exercise. This was an exercise artificiality and was explained in advance to participants both at the briefing on 9 September 2013 and in the General Instructions briefing document provided to all participants. However, this constraint does not detract from the learning derived from the exercise.

b) Experience: There was a combination of staff who were very experienced in their PHE response roles and who had already had experience of both exercises and of real life PHE activation, and those staff who were less familiar or new to the role and the supporting technology systems and response arrangements.

6.   Presentation of lessons identified and recommendations

6.1   The lessons identified in this report are presented in the following manner. The report highlights an observation and gives the context in which it arose. Evidence for the observation is demonstrated using the exercise feedback. Finally, recommendations for addressing each observation are given. Some of the observations are interlinked and some of the recommendations may apply to more than one observation. In these cases they are cross referenced. The recommendations are also listed in **Appendix A**.

6.1.1 The lessons are grouped into the following themes.
- Command, Control and Coordination
- Communications – internal and external
- IT, Resources – tools and templates
- Staff and roles
- Plans, SOPS and supporting documents

The recommendations in this report are based on the evaluation of the exercise as described in Section 5 and on the detail of the plans, SOPs and Job Action Sheets (JAS) that were made available to the Exercise Design Team.

6.2   General

6.2.1   The PHE OP should provide sufficient guidance to inform ECDC staff how to respond to a PHE. The responding staff should be familiar with the command, control and

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management structure of ECDC and the management structure itself should be appropriate for the successful delivery of the PHE response. During the exercise staff at ECDC successfully:

a) Activated the EOC and used appropriate SOPs, tools and templates for responding to a PHE
b) Activated and de-activated PHE level 1
c) Completed a Rapid Risk Assessments (RRA) at the request of DG SANCO concerning a case of Ebola in France
d) Put together a mission in support of WHO to assist the outbreak control team in the Ivory Coast dealing with the Ebola outbreak; and provided a mission to Slovenia in response to a MoH request to provide technical assistance and communications advice in respect of the public health impact of an algal bloom along the Adriatic Coast.
e) Provided statements to the press and Lines To Take (LTT)

6.2.2   However, the exercise did outline areas for improvement in the response of ECDC to a PHE and these are reported as recommendations. It should be noted that these refer to the plans and procedures governing the organisation's response to the exercise scenario and should not be used to judge individual performance or the content of the products that were produced by staff (for example RRAs or press releases) during the course of the exercise.

6.3   Observations, lessons identified and recommendations

6.3.1   Command, control and coordination
Command can be defined as the decision making faculty of an individual or an organisation. In the PHE OP, command rests with the Director who acts upon advice from the Senior Management Team (SMT) and selected advisors in a group called the PHE Management Team (PHEMT).

Control is the mechanism by which commands are carried out and in this report will refer primarily to the relationship between the PHEMT and the PHE Response Team (PHERT) through the PHE Manager and Operational Group Leaders.

Coordination is the passage of instruction and effective use of the resources available to achieve the task.

The overall aim of ECDC during a PHE Level 1 or Level 2 is to minimise the impact of the emergency on EU citizens (external public health emergency), by assisting the Member States and the European Commission in their response activities.

During Exercise ARTEMIS it was observed that good command, control and coordination was quickly established and that a well-functioning PHE system was put in place. In particular, both the strategic level and management level PHE meetings kept to time and made decisions in an efficient way. The people in the key functions knew what they were doing; tasks were dispensed or delegated, carried out and followed up. Overall, the system worked and the players did what was required. Meetings were well-structured and conducted in accordance with the PHE OP.

The establishment of a smaller PHE strategic team was a recommendation that came out of a previous exercise (Exercise Beavi 2012) and this was seen as a distinct improvement, enabling the strategic meetings to be shorter, more focused and effective. For example, the Director decided to hold a separate technical meeting to discuss options with technical experts rather than include this discussion within an SMT decision making meeting. This ensured the meeting remained focused on what was required.

Observation 1: The mechanics for out of hours activation of the PHE were confusing and slow.

The PHE OP states that outside normal working hours, the duty officer should inform the Head of Unit, Surveillance and Response Support, or the second line duty officer, who informs the Director. In this exercise, the mechanics for the PHE activation for the simulation exercise were a little slow.   After receipt of out of hours emails (i.e. an EWRS message), the exercise started at 08:00 CEST, one hour before the start of ECDC's normal office hours. This caused some confusion and delay as some of the staff required in the upgrading process were not readily available. The Director wanted to initiate the PHE upgrade process but the SOP specifies that the process must be initiated by the Head of SRS, who was still travelling to work at that time. When the request to start the upgrade process was made by the Head of SRS, the Director did not have the necessary support immediately available to contact all the required functions in ECDC and to convene an emergency meeting.

One way to alleviate this problem would be for the out of hours Duty Officer to have a PHE upgrade kit to kick-start the upgrading process. This could be a set of procedures and contact numbers enabling the necessary meeting to be rapidly convened and decisions taken outside of normal office hours. Clarification on how the process should be initiated outside normal working hours in the form of an SOP and the provision of an 'upgrading kit'

would assist the early establishment of command and control and the PHE response. The process would also benefit from a clear cascade of responsibilities in the case where certain roles/functions are unavailable.

PHE upgrade request

When the ECDC senior management team (SMT) met and agreed to upgrade the PHE level, the Director signed and authorised a PHE upgrade request form as part of the upgrading process. However, this form was not then added to the PHE Intranet and no one seemed to know what to do with the form. It did not appear to add any value to the process, and it was felt that this part of the SOP hindered rather than helped an efficient launch of the upgrade process. Although players suggested in feedback that it would have been simpler and more effective to minute the decision in the SMT Minutes, the decision to upgrade is not always made at an SMT meeting. In general, the Director's decision to upgrade the PHE Level must be recorded and it would be more efficient if the PHE Upgrade Request form was accessible via the PHE Intranet so that the decision is clearly recorded and stored on the PHE Intranet.

> **Recommendation 1.0**: The out of hours Duty Officer should have a PHE 'upgrade kit'. This would be a set of procedures (SOP) and contact numbers enabling the necessary meeting to be rapidly convened and the decision to activate the command and control for the PHE response to be taken outside of normal office hours
>
> **Recommendation 1.1**: To review the PHE Upgrading SOP
>
> **Recommendation 1.2**: The decision to upgrade the PHE level is recorded and stored on the PHE Intranet

Observation 2: The decision to upgrade out of hours was hindered by lack of clarity around the procedure when not all of the involved parties required in the decision making process were available.

The PHE OP needs to be flexible enough to accommodate a situation in which one or more key post holders, plus their deputy, are unobtainable during an emergency. The Head of Unit, SRS was not at ECDC during the initial stages of the exercise and this proved to be a bottle neck as the PHE Upgrading SOP specifies that the process must be initiated by the Head of Unit, SRS.

In the event of a future crisis, an agreed cascade of responsibility within SMT would be a useful provision against a situation in which the Director is not available to make an upgrade decision. This cascade could include the post holder, its deputy and second line deputy.

During Exercise ARTEMIS, once the PHE upgrade had been agreed and a PHE Manager appointed, decisions and actions were undertaken in a coherent and effective manner; clear orders were given and received and the organisation of team work was very efficient. However, as previously mentioned, it was noted that only certain individuals can make decisions and have the authority to sign off on documents. In the case of a real PHE, this may cause significant and unnecessary delay while authorisation is awaited. The inclusion of additional staff who are empowered to make decisions would strengthen the management team.

Recommendation 2.0: The PHE OP should clarify who can make decisions in the event that key decision makers are not available

Recommendation 2.1: The second line Duty officer should have the power to initiate the PHE upgrade procedure in an emergency situation where the Head of SRS is not available

Recommendation 2.2: To consider the inclusion of additional staff empowered to make decisions in order to strengthen the management team

Observation 3: Too much time during the response was spent in meetings which caused a delay in the command and control of the response and in the information flow.

A series of meetings held during the day constitute the daily staff rhythm. These include the Senior Management Team meeting, the PHE Management Team meetings, the PHE Response Team meetings and the Operational Group meetings. In addition there is the daily Round Table meeting at 11:00am.

Whilst it was noted by the evaluation team that the smaller PHE strategic team worked much better than the larger strategic team used in Exercise Beavi, it was also noted that there were still too many meetings during the day and the PHE Manager in particular was overloaded with attending too many meetings and his lack of availability caused a delay in communications and information flow. Participants also felt that too much information is channelled through the PHE Manager.

Participants suggested that a review of the number of meetings is required to alleviate this problem. In addition, it might also be worthwhile to provide additional support to those key individuals, such as the PHE Manager, in the form of deputies who are empowered to make decisions, and a reassessment of what is required to go through the PHE Manager for approval and sign off may help improve his workload.

There also appeared to be some confusion as to whether a minimum number of participants is required to start the SMT meeting on emergency upgrade in an out of hours situation, and it is recommended that the SMT should decide on a minimum quorum for emergency meetings out of hours. Furthermore, in an emergency situation the Director should be able to assemble a PHE Strategic Team directly, without reference to the Head of SRS but with the support of the 24/7 Duty Officer and the Second Line Duty Officer.

During the exercise, the SMT acknowledged that the demands of the PHE required their complete focus and they could not attend to other work during the day. In a real incident, the Director and other others would cancel all other meetings/work in order to focus entirely on the incident.

It was noted in feedback from the exercise that the provision of meeting minutes for display in the DMS/PHE Intranet (even in draft format) would assist the information flow and the work of the Operational Groups as waiting for these to be finalised and authorised may impact on the ability to implement actions in a timely manner.

Recommendation 3.1: To review the number of meetings required and/or provide additional support to key individuals in the form of deputies and who can stand in at meetings and are empowered to make decisions (see also Recommendation 2.2).

Recommendation 3.2: To decide on a minimum quorum for an emergency SMT meeting out of hours.

Recommendation 3.3: Meeting Minutes to be uploaded in draft format to the DMS/PHE Intranet for information.

Observation 4: Communications arrangements outside normal working hours were not always clear

There are two generic mailboxes in use for routes of communication into ECDC: one is for external partners, the support mailbox (support@ecdc.europa.eu), and one is for the public (info@ecdc.europa.eu).

The support mailbox is monitored by the EI Duty Officer but, during the exercise, emails that were sent out of hours to the public mailbox were not monitored until the next day and it was not clear who is responsible for monitoring the public mailbox out of hours.

More clarity on out of hours emergency communications protocols (out of hours emails/ phone) is required. It was noted in the Director's feedback that he did not have immediate access to the contact numbers he required whilst driving to work and that these should be readily available and accessible to support the upgrading process. The interoperability of different tools, such as Tablets, with extant tools and systems should be considered, and whether the development of additional tools such as a mobile phone App would be useful to provide out of hours staff with access to all the necessary information required for PHE activation and communication. It was acknowledged that it is important that staff have the correct tools to fulfil their role/function.

> **Recommendation 4.0:** More clarity is required on out of hours emergency communications protocols (out of hours emails/phone)
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> **Recommendation 4.1:** The out of hours alerting and notification of an emergency procedure needs further development and clarification of the communication cascade. The availability of an accessible contact list in an out of hours situation would also be useful.
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> **Recommendation 4.2:** Consideration should be given to the interoperability of tools to be utilised to support staff with the information required for PHE activation and communication.
>
> **Recommendation 4.3:** Consideration also to be given to further development of the IT strategy to include additional tools that might be used in PHE response to ensure staff have the correct and appropriate tools to fulfil their roles and functions. This should include the feasibility of using i-Pads and development of mobile phone Apps.

Key points from the rest of the section is included in Annex A

Appendix A – Recommendations from Exercise ARTEMIS

| Serial	Recommendation
1	**Recommendation 1.0**: The out of hours Duty Officer should have a PHE 'upgrade kit'. This would be a set of procedures (SOP) and contact numbers enabling the necessary meeting to be rapidly convened and the decision to activate the command and control for the PHE response to be taken outside of normal office hours
2	**Recommendation 1.1**: To review the PHE Upgrading SOP
3	**Recommendation 1.2**: The decision to upgrade the PHE level is recorded and stored on the PHE Intranet rather than recording the decision by completing an Upgrade Request Form
4	**Recommendation 2.0**: The PHE OP should clarify who can make decisions in the event that key decision makers are not available
5	**Recommendation 2.1:** The second line Duty officer should have the power to initiate the PHE upgrade procedure in an emergency situation where the Head of SRS is not available
6	**Recommendation 2.2**: To consider the inclusion of additional staff who are empowered to make decisions in order to strengthen the management team
7	**Recommendation 3.1**: To review the number of meetings required and/or provide additional support to key individuals in the form of deputies and ensure they are empowered to make decisions. (see also Recommendation 2.2)
8	**Recommendation 3.2**: To decide on a minimum quorum for an emergency SMT meeting out of hours.
9	**Recommendation 3.3**: Meeting Minutes to be uploaded in draft format to the DMS/PHE Intranet for information
10	**Recommendation 4.0:** More clarity is required on out of hours emergency communications protocols (out of hours emails/phone)
11	**Recommendation 4.1:** The out of hours alerting and notification of an emergency procedure needs further development and clarification of the communication cascade. The availability of an accessible contact list in an out of hours situation would also be useful.
12	**Recommendation 4.2:** Consideration should be given to the tools to be utilised to best support staff with the information required for PHE activation and communication.

Serial	Recommendation
13	**Recommendation 4.3:** Consideration also to be given to further development of the IT strategy to include additional tools that might be used in PHE response to ensure staff have the correct and appropriate tools to fulfil their roles and functions. This should include the feasibility of using i-Pads and the development of mobile phone Apps.
14	**Recommendation 5.0:** To improve the means and frequency of communicating to all staff regarding PHE response levels, requirements and activities.
15	**Recommendation 5.1:** To consider supplementing information on the PHE Intranet with screens/whiteboards in the EOC, the Internal Decision Room and the Operations Room to display key situational information.
16	**Recommendation 5.2:** To further develop the communications handbook to include improved guidance for internal communications.
17	**Recommendation 6.0:** To increase staff awareness of what is available on the PHE Intranet and where information can be found.
18	**Recommendation 6.1 :** To remind PHE key function holders that important emails should be copied to the PHE Logger and marked 'TBL' (To Be Logged)
19	**Recommendation 6.2:** A Decisions & Actions List should be developed and maintained throughout the PHE response.
20	**Recommendation 7.0:** ECDC could benefit from some pre-prepared messages for some of the more unusual diseases (e.g. VHF, Marburg, Plague, Anthrax, Rabies, etc) that could be perceived as alarming by the public.
21	**Recommendation 7.1:** An SOP and template should be developed to enable the PHE Manager, the Technical Group and the Communications group to produce an early media holding statement.
22	**Recommendation 7.2:** Public messages should be clear, prompt and the language used should be appropriate to the recipient.
23	**Recommendation 7.3:** Communications Team should have a list available of appropriate and relevant ECDC experts/ "Talking Heads" with matched topics and relevant pre-prepared Lines to Take.
24	**Recommendation 7.4:** An SOP to be developed for the management and authorisation of 'tweets' for publication on the official ECDC Twitter site
25	**Recommendation 7.5:** Future exercises should test the response of social media and hierarchies of sign-off and authorisation processes for 'tweets' to be published on the ECDC Twitter site.
26	**Recommendation 8.0:** Further work to develop the PHE Intranet is required to integrate with other tools to make these more time efficient and user friendly.
27	**Recommendation 8.1:** Guidance is required regarding document storage (what should be stored and where). This could be included in the SOPs and JAS.

Serial	Recommendation
28	**Recommendation 8.2:** A list is required about what SOPs/templates are available and where these are located in the PHE Intranet/DMS.
29	**Recommendation 8.3:** To assist and improve situational awareness, a "news ticker" should be developed and provided to the PHE management and response teams.
30	**Recommendation 9.0:** Guidance is required regarding which tools should be used to provide the required information (e.g. Executive Summary). This could be included in the SOPs and JAS.
31	**Recommendation 10.0:** A checklist should be developed to ensure that all necessary equipment for the EOC is provided and is fully functioning.
32	**Recommendation 11.0:** Consideration should be given to the most appropriate rooms available to be used for meetings (taking into account size, number of attendees, equipment required, etc).
33	**Recommendation 12.0:** Guidance to be developed for an email etiquette and to support the use of generic mailboxes.
34	**Recommendation 12.1**: Staff to be encouraged to work collectively in their daily work to facilitate adaptation to working within a PHE environment.
35	**Recommendation 12.2:** A protocol should be developed to ensure ease of reference to the relevant subject matter in email threads in the case of multiple PHEs.
36	**Recommendation 13.0:** The list of generic mailboxes should be kept up to date and amendments should be cross-referenced in the SOPs and JAS.
37	**Recommendation 13.1:** Key contact lists and telephone numbers should be accessible out of hours and kept up to date.
38	**Recommendation 14.0:** To consider the further development of a GIS mapping support tool to support emergency activities.
39	**Recommendation 15.0:** Future exercising should include testing the resources of the Administrative team.
40	**Recommendation 16.0:** Further training and exercise opportunities should allow for less experienced staff to shadow more experienced staff in order to practise roles and responsibilities in a safe learning environment
41	**Recommendation 16.1:** To develop a skills matrix as a useful tool and resource to understand who has knowledge and experience of PHE response roles.
42	**Recommendation 17.0** Consideration to be given to creating additional deputy roles to those key roles/functions where the responsibility is currently with one post holder (See also Recommendation 2.2)
43	**Recommendation 18.0:** Consider locating the PHE Manager with the functional Group Leaders so he can communicate directly with them and improve the

Serial	Recommendation
	information flow
44	**Recommendation 18.1:** Review the workload and demands on the PHE Manager, including clarification of what information needs to go through the PHE Manager for authorisation in order to improve the communications and information flow
45	**Recommendation 18.2**: PHE Manager and lead Technical Expert should prioritise the task of developing an early short media "Lines To Take" document. (See also Recommendation 7.2)
46	**Recommendation 18.3:** Consider the development of an administrative support role to the senior management team
47	**Recommendation 19.0:** To consider incorporating the Business Continuity function into a wider Resource Management & Coordination portfolio
48	**Recommendation 19.1:** The role of BCM requires clearer definition to avoid overlap with the PHE Manager role
49	**Recommendation 20.0:** The Strategic Analyst role requires further definition in the overall PHE structure. A clear template/procedure for the Strategic Analyst is also required.
50	**Recommendation 21.0:** Consider co-locating the internal and external communications teams.
51	**Recommendation 21.1:** Consider creating a single "Head of Communications" to cover an integrated communications function.
52	**Recommendation 21.2:** Clarification is required regarding the roles of the Web & Social Media Coordinator and the Editor's role
53	**Recommendation 21.3**: Consider co-locating the Comms Coordinator with the Technical Group.
54	**Recommendation 22.0:** Further logger training to be provided
55	**Recommendation 22.1:** Clear guidance on how the PHE Log should be used and what should be logged during a PHE
56	**Recommendation 23.0:** SOPs and JAS to be further amalgamated and/or simplified where possible
57	**Recommendation 24.0:** Further training opportunities to be provided for staff to practise their PHE roles and responsibilities and utilise SOPS, tools and systems
58	**Recommendation 25.0:** An SOP and template to be provided on the PHE Intranet/DMS for the RRA.

Appendix B – Exercise structure:

ECDC Public Health Emergency Management Team structure
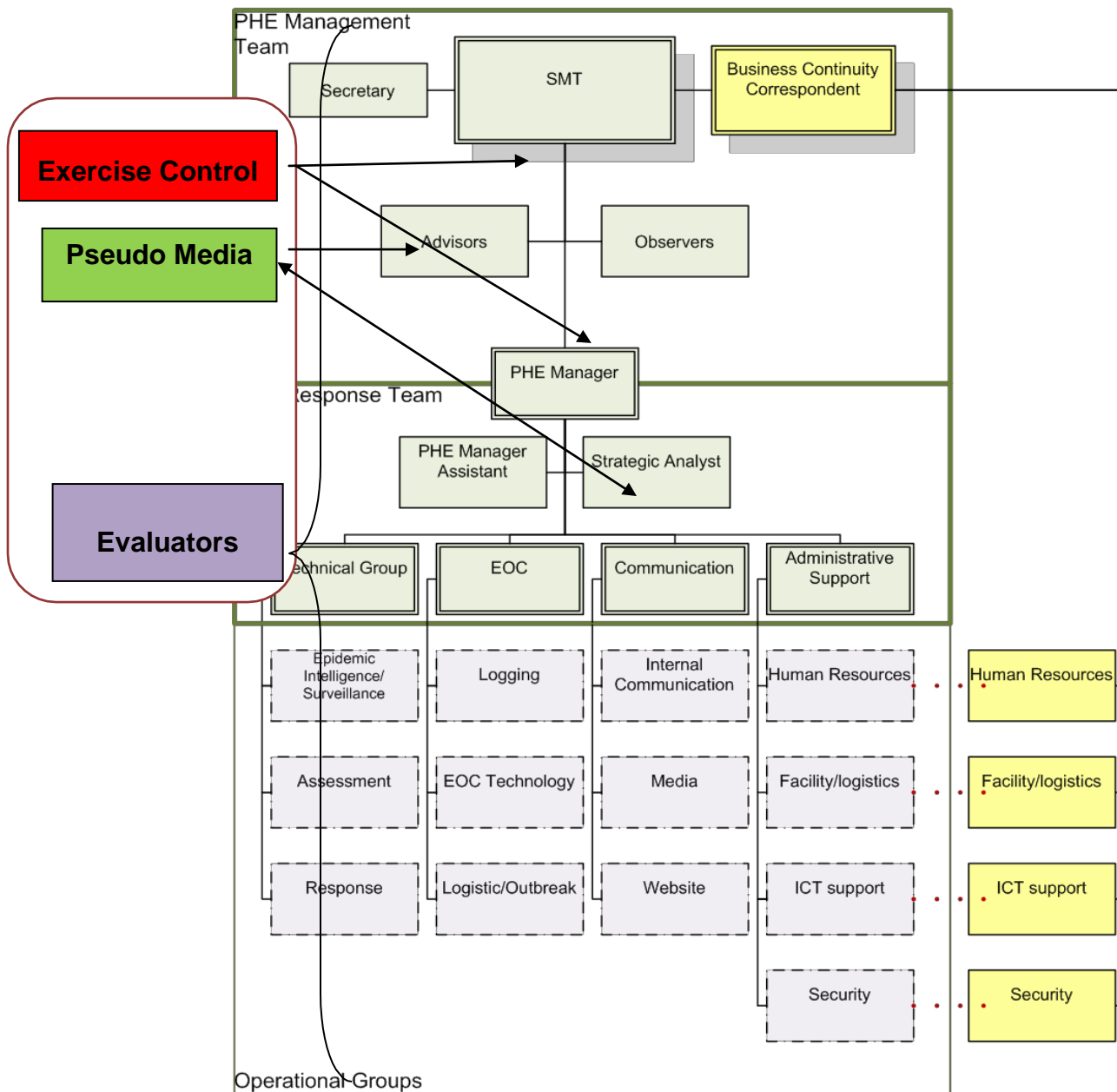
Appendix C – List of participants

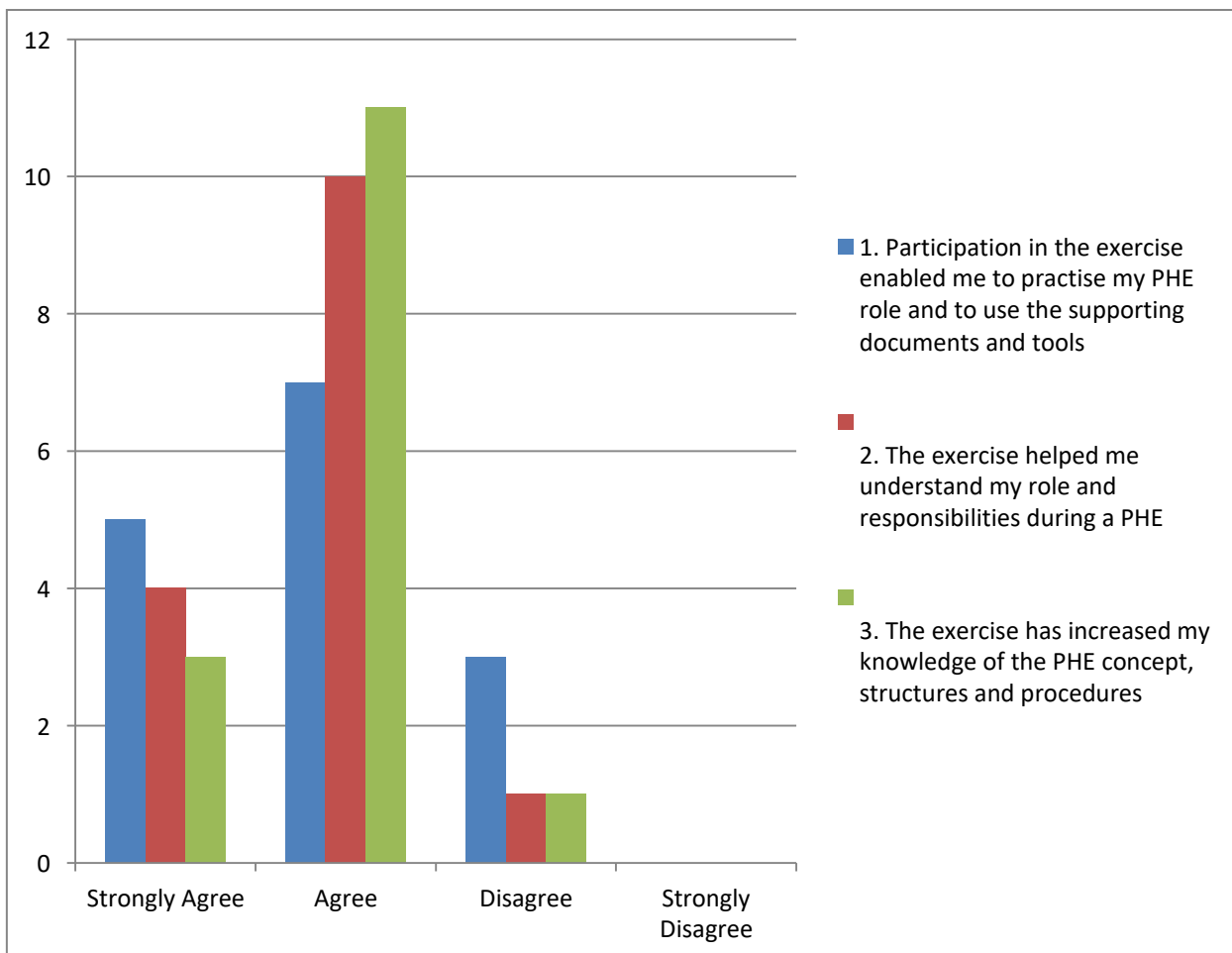## PHE ASSIGNMENT LIST

10 September 2013   **08:00-17:00**

PHE Name: Artemis		Contact details	
		Phone ext.	*Participation*
Director			
Deputy of the director			
Chief Scientist			
Head of SRS			
Evaluator			
Internal Communication			
BCP			
PHE manager secretary			
PHE manager secretary support			
PHE manager			
PHE manager assistant			
Strategic analyst			
Strategic analyst support			
Technical group leader			
Epidemic intelligence/surveillance			
EI/Surveillance support			
EI/Surveillance support			
Assessment/Response			
Microbiology			
EOC group leader			
Logger			
EOC technology			
Logistics and Outbreak			
ICT Support			
ICT Support			
Communications group leader			
Media Coordinator			

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Press/Media Officer			
Web/Social Media Coordinator			
Web/Social Media Editor			
Administrative support group leader			
Human resources			
Facility/logistics			
Facility and Logistics support			
Security			
Missions and Meetings			
Missions and meetings support			
Finance			

ECDC Participants - Post exercise evaluation workshop – 23 September 2013

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Appendix D – Participant feedback

Exercise Artemis: Participant Feedback

Appendix E: Exercise Artemis Photos

Glossary

Acronym	Explanation
BC	Business Continuity
CPX	Command Post Exercise
ECDC	European Centre for Disease prevention and Control
EI	Epidemiological Intelligence
EOC	Emergency Operations Centre
EWRS	Early Warning & Response System
DG SANCO	Directorate General for Health and Consumers
DMS	Document Management System
HR	Human Resources
JAS	Job Action Sheet
LTT	Lines To Take
MS	(EU) Member State
OAT	Outbreak Assistance Team
OG	Operational Group
PHE	Public Health Emergency
PHEMT	Public Health Emergency Management Team
PHERT	Public Health Emergency Response Team
PHEOP	Public Health Emergency Operations Plan
RRA	Rapid Risk Assessment
RT	Round Table
SARMS	Scientific Advice Repository and Management System
SRS	Surveillance Response Support
SOP	Standard Operating Procedure
TTT	Threat Tracking Tool
WHO	World Health Organization

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Acknowledgements

Exercise Planning Team:

Name	Job title	Organisation
	Senior Scientific Adviser	Public Health England
	Exercise Manager	Public Health England
	Exercise Coordinator	Public Health England
	Lead Evaluator	Public Health England
	Support Evaluator	Public Health England
	Pseudo Media	Public Health England
	Threat Assessment Specialist	ECDC
	Senior Expert – Epidemic intelligence Group leader Epidemic Intelligence and Emergency Operations	ECDC
	Secretary - Surveillance and Response Support Unit (SRS)	ECDC

Acknowledgement is also made regarding the effort and contribution made to the exercise and to the evaluation that helped inform this report by Ben Duncan, the internal ECDC PHE Evaluator.

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Disclaimer

The exercise scenario is entirely fictitious and is intended for training and exercise purposes only.