1. Introduction

One of the key elements in the planning process, which provided assurance that the HPA was fit for Games time, was the testing and exercising programme; from steady state to major events.

The HPA agreed a programme of testing and exercising which involved identifying the risks internally and across organisations/key stakeholders; how these could be tested in the planned cross government schedule led by the Cabinet Office (CO) Government Olympic Executive (GOE); and any gaps and internal requirements.

The standard process was followed: exercise planning; delivery; evaluation; identifying lessons; analysing how these would be taken forward; actions; and monitoring delivery of recommendations.

2. Objective

To ensure through this programme of testing and exercising that during the London 2012 Olympic and Paralympic Games (the Games), public health data and information flows would be timely and accurate, and the appropriate public health response, advice and information would be actioned in the event of a public health incident.

3. Criteria for success

The HPA is able to deliver its Games time commitments through the provision of data, response, information and advice as agreed.

4. Context

In order to ensure that the HPA was able to deliver its Games time commitments, a number of tests and exercises needed to be undertaken. This provided assurance that:

- The internal Olympic and Paralympic Concept of Operations (CONOPS) was fit for purpose and sustainable over the three month duration
- The systems and capacity were in place to receive, rapidly analyse and react to surveillance, reporting and intelligence information, and to identify and respond to any potential health protection threat
- Command, Coordination and Communication (C3) arrangements with key external stakeholders were fit for purpose and sustainable over the three month duration of the Games.
The main focus for the testing and exercising plan was to test Games additionality – i.e. the differences in the C3 structures and how the HPA would work during the Games. With seven years to plan for this, the HPA took an event-based approach, as stated in the Games CONOPS, rather than an emergency response approach.

As part of its normal business the HPA is involved in exercises as category 1 responders to meet the Civil Contingencies Act 2004, delivered through the Emergency Response Division (ERD) and emergency planners across the HPA. This provides assurance that the HPA is able to respond to an emergency. Wherever possible, this was linked in with the Games work to reduce duplication.

The four key areas tested were:

- The HPA CONOPS and provision of a daily public health situation report (SitRep)
- Steady state collection, analysis and reporting of data normally undertaken on a weekly basis (undertaken 7 days a week during Games time)
- Working with the London Organising Committee of the Olympic and Paralympic Games (LOCOG) Medical team; the provision of data from the Olympic Polyclinic(s) to the HPA using their medical encounter forms and Notifications of Infectious Diseases (NOIDS) reporting and working with them to respond to an incident at the venues or affecting the ‘Olympic family’
- The C3 arrangements developed for the Games, led by GOE, both steady state and in terms of the additional response required to a range of risks.

Due to the limited time available, very quick evaluations and debriefs followed each exercise, with specific actions and tight deadlines agreed. Any further exercises were reviewed to ensure these actions would be challenged in them.

Resilience

The HPA had to ensure it had the resilience to provide both Games time commitments and response and a business as usual response to non Games-associated incidents. Arrangements were agreed between the Olympic Office and emergency response colleagues, and for these to be tested.

CBRNE

The HPA were engaged, through Emergency Response colleagues and other specialists, in the safety and security testing and exercise programme for chemical, biological, radiological, nuclear and explosive (CBRNE) risks, through the Olympic Security Board, the Olympic Resilience Programme and other CBRNE programmes. The HPA was invited to participate in some of the planned test events for these. The HPA was also involved in a number of exercises testing the CBRNe response, led by the Home Office or the Department of Health (DH). These exercises are not reported here.

5. Stakeholder engagement

Work was undertaken to ensure coordination and cooperation across all key stakeholders and exercise plans: this was critical to ensuring success. There were a number of groups established to facilitate this that the HPA linked into:

Health Testing and Exercise Plan was signed off by GOE and the DH Olympic and Paralympic Health Programme Board in June 2011

- GOE led Government Testing Working Group with cross-Government leads, the Cabinet Office and LOCOG
- Olympics Resilience Programme Board (Home Office/HO)
- London Resilience Team (LRT)
- LOCOG: Resilience, Safety and Security and Medical Services Teams.

6. Assurance

A Testing and Assurance workstream was established. One of its roles was to oversee the exercise programme to ensure it addressed the key identified corporate and public health risks. Through reports and an internal audit process, the delivery of this programme was assured.

The HPA also provided assurance to the GOE and DH that the HPA was able to deliver its Games time commitments.

7. Learning

An important element of undertaking tests and exercises is identifying lessons and recommendations for improvement. These were captured and shared internally, externally with GOE and across health and regions – in particular London, through the Greater London Authority London Resilience Team.

8. Training

The HPA has a well-established training programme to support its standard emergency response. Training needs were reviewed for the Games and training delivered to those less experienced either in operating during an emergency or according to the Games CONOPS. A specific requirement was identified around Central Government Emergency Response Training (CGERT) for staff who might need to attend Cabinet Office Briefing Room (COBR) meetings, etc. As part of the Games legacy, the agency now possesses a broader cadre of people with the capacity to do this.

9. Risk assessments

A risk assessment of the Olympic additionality led to the identification of the following risks:

1. Inadequate resourcing, training and experience to deliver HPA commitments sustainably
2. Lack of high quality timely surveillance, reporting and intelligence data could mean that a potential outbreak/unusual event might be missed, or that a slow response could mean increased threat to the Games and local population. The provision of daily data needed to be challenged
3. Poorly defined communications and data flows internally and between key partners such as LOCOG
4. Information and C3 flows across all stakeholders (health, LOCOG, COBR Government Coordination Centre (COBR-GCC), Main Operating Centre (MOC), LOCOG intelligence centre) not fit for purpose
5. If an event occurs at an Olympic/Paralympic venue HPA staff will not be able to access the site quickly due to lack of accreditation
6. In the event of a deliberate release, procedures for escalation and ensuring public health information and advice not fit for purpose – processes and information need to be pre-
agreed and tested with key partners Defence Science and Technology Laboratory (DSTL), Atomic Weapons Establishment (AWE), DH, HO etc.

7. Possible risks of impact of transition to Public Health England (PHE) on key organisations.

Key public health risks identified in the Olympic Safety and Security Risk Assessment (OSSRA):

8. Minor outbreak of infectious disease in Games venue (e.g. salmonella)
9. Serious foodborne/infectious illness or gastrointestinal (GI) outbreak at Games site (e.g. Norovirus / E Coli)
10. Emerging infectious/communicable disease during the Games (e.g. SARS-like illness).

In addition:

11. LOCOG’s concerns about air quality issues and the impact these might have on elite athletes, in particular during endurance events.

10. Tests and Exercises

A selection of tabletop (TTX), command post (CPX) and live events (LIVEX) exercises were used. Wherever possible the HPA used planned exercises, many of which were being run by stakeholders such as GOE, HO and LOCOG. The HPA undertakes a number of exercises annually, and so whenever possible these were adapted, or the Games element was run in parallel. The exercises used scenarios based on the risks identified in the OSSRA, the HPA public health Olympic and Paralympic risk register, and the operational risks identified by the HPA for Games time delivery, in particular the key public health risks 7 – 9.

The list of tests and exercises are at Annex 1. These were mapped early on and gaps, recommendations, lessons to be learnt and training needs were identified throughout the process.

11. Outcomes and recommendations

A series of reports and recommendations were produced following each exercise, with the recommendations and actions reviewed by the Assurance and Testing Workstream, the HPA’s London 2012 Programme Board, Emergency Response Development Group and the Executive Group.

A rapid response to exercise recommendations ensured that all areas identified as needing action were taken forward and addressed in a timely manner.

All the risks identified in the risk assessment were addressed through this exercise programme and the HPA successfully demonstrated its ability to deliver its Games times commitments through the ConOps, reporting and response mechanisms in place for the Games.

The one key area that was not sufficiently tested comprised the elements of risk Nos 3, 4 and 5 associated with LOCOG. Unfortunately, LOCOG took very late delivery of the Polyclinic and Medical Reporting systems, so the information from these was not tested and caused some considerable teething problems. The steady state issue of staff needing escorted access to the Polyclinic raised concerns about rapid access if it was required for a major incident; fortunately this was never tested, but it continued to raise concerns during the Olympics but was resolved for the Paralympics.

Recommendations:
For the HPA/PHE

- Undertake more internal exercises across divisions, such as Exercise Apollo
- Test early to ensure operations centres and roles, staff training and logistics are fit for purpose – this ensured comfort when operational work began and avoided major logistics issues (there were some IT problems but the response was good)
- Include HR issues in tests: get engaged and agree processes regarding funding and ways of working well in advance.

For those involved in future mass gatherings

- Enhance and modify normal working arrangements: don't reinvent the wheel
- Test, test, test – start with steady state business as usual and ensure this is fit for purpose before escalation to significant and major events
- Ensure staff are sufficiently trained and involved in exercises, especially if event response is managed outside business as usual
- Test across partner organisations and all stakeholders to ensure multi-agency command, control and communication works, and all stakeholders understand their roles and responsibilities
- Include communications
- Test logistics and setup of operational centre
- Understand the rapidity with which information will be required and include this in exercises
- Adopt Single Point Of Contact (SPOC) approach, use technology: email and phones ensured 24/7 availability of key roles (not people)

12. Legacy for HPA/PHE

- Broader cadre of people trained and familiar with event based approach across HPA. This knowledge will transfer into PHE and provide support for those planning future mass gatherings in the agency, across health and internationally
- Broader cadre of people with operational centre experience
- Games ConOps can be switched back on if required
- SPOC: email and phones ensured availability 24/7 of key roles (not people)
- Broader cadre of people who have undergone CGERT training
- Corporate Information Response Administration System (CIRAS) is developed further, tested and used operationally
- Exercises were run to very tight timescales with rapid debriefs, identification of actions with tight deadlines, and close monitoring of these. Actions were then challenged during subsequent exercises.
Annex 1: List of key exercises by lead organisation and date

**GOE / CO led**

CPX 1 Yellow Fortius, September 2011  
Aim: Test C3 arrangements across all parts of the Games landscape in steady state and “low to moderate” risks and issues

CPX II Black Chariot, December 2011  
Aim: Test C3 arrangements across all parts of the Games landscape in steady state and “low to moderate” risks and issues

CPX III Green Altius, April 2012  
Aim: to test a small number of major incidents that would directly impact on the Games. The HPA was involved in the level 4 industrial incident in London. This was set up to test working across London partners and national escalation arrangements.

TTX Exercise(s) Golden Chariot – regional venue CBRNE (Sept 2011 to Feb 2012)  
Regional HPA leads involved. Local Level Table-Top Exercises provided opportunities to test local level structures, processes, and multi-agency interaction and coordination against significant emergencies during peak Games-time activity in each venue area.

**DH**

Helix (Forward Defensive) 23 – 24 Feb 2012, CPX  
DH / LOCOG and key partners TTX, 31 May 2012

**LOCOG (sports test events)**

July – August 2011 – Cluster 1  
September 2011 – January 2012 Cluster 2 – HPA involved in some Food, Water and Environment (FWE) sampling and testing with LOCOG and Local Authorities  
April – May 2011 Cluster 3 – HPA involved as above

**HPA**

Bucephalus, February 2010  
Aim: to exercise the HPA’s Incident and Emergency Response Plan (IERP) and the HPA Olympic CONOPS, and to explore the capability of HPA to respond to two concurrent serious incidents during the 2012 Games

Wenlock, August 2011  
Aim: To test internal processes and to provide assurance that systems and processes are in place one year before the Games, and to test working with LOCOG

Apollo, April 2012  
Aim: CPX to test the HPA’s escalation and surge response capability to a major infectious disease outbreak during the Games across Health Protection Services and Microbiology Services Division. The Food Standards Agency was involved to test and clarify working arrangements between the two organisations during a major food poisoning incident.

London:
- Delphi, March 2011 – Test the Pan London Outbreak plan with key stakeholders using an incident occurring during Games time
- Pamina, Nov 2011 – Exercise the strategic and operational command and control of a health response to a chemical incident in London.
In addition, a number of regional exercises were also undertaken with Health Protection Units (HPUs) and regional resilience teams.