



LONDON RESILIENCE HUMAN INFECTIOUS DISEASES RESPONSE FRAMEWORK

Sept 2011

**LONDON HUMAN INFECTIOUS DISEASES FRAMEWORK
INFORMATION SHEET**

Who is the national lead?	Department of Health
Who is the London co-ordination lead?	In planning phase the lead is NHS London
Who initiates the London Resilience Human Infectious Diseases Framework?	The decision whether to convene a partnership meeting or monitor the situation will be made during a Tripartite discussion between NHS London, HPA and LRT
Who notifies the London Resilience Partnership of a Human Infectious Diseases event?	Partners will be notified according to the LESLP Protocol and a Gold Coordinating Group formed.
What communication methods will be used?	A 'Talking Head' from the most appropriate agency will be identified (either NHS London or the HPA) and a London media cell will sit alongside the Gold Coordinating Group, through which public messages will be formed and communicated.
When will the London framework be reviewed?	Bi annually revision unless an incident or lessons from exercises requires earlier revision
Key Partner responsibilities	<p>NHS London – Provide strategic direction for local health services involved and ensure others are ready to support.</p> <p>HPA – The HPA's function is to protect the community (or any part of the community) against infectious diseases and other dangers to health. Responsible for providing information and services to support a consistent London - wide public health response to emergencies.</p> <p>Local Authorities – As well as having an important role to play in the control of infectious diseases, they also have statutory powers to deal with an outbreak.</p>
Who will coordinate the media response?	Coordinated through the media cell.
Delivery of pan London measures	The Gold coordination group will coordinate and deal with pan London multi agency issues.

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1 Introduction

- 1.1 At the beginning of the 21st Century, human infectious diseases are a major global threat: to health, to prosperity, to social stability and to security. Infectious diseases account for 41% of the global disease burden with infections such as HIV/AIDS, tuberculosis and malaria accounting for millions of deaths worldwide each year¹.
- 1.2 Furthermore, the deliberate release of infectious agents to cause harm to a civilian population or to the troops of a military opponent has been the subject of extensive discussion, analysis and scientific papers over several decades. A report by the Royal Society published in July 2000 identified 25 micro-organisms or bacterial toxins that potentially could be used in a deliberate release.
- 1.3 Due to the fact that human infectious diseases can take a variety of forms and consequently their impacts can vary considerably in both scale and nature, it is important to ensure that generic arrangements are in place for responding to outbreaks of infectious diseases. Specific arrangements are already in place for responding to pandemic influenza, as detailed in the London Regional Resilience Flu Pandemic Response Plan².

Aim and Scope of Human Infectious Diseases Framework

- 1.4 The aim of this document is to provide the agencies that make up the London Resilience Partnership with a strategic framework to support their integrated preparedness and response to an infectious disease outbreak. Underlying this aim is the need to save lives and reduce the impact on the health of Londoners and to minimise, where possible, the social and economic disruption for the population of London in the event of an outbreak of an infectious disease.
- 1.5 The framework is generic by design. Local management of infectious diseases depends on many factors and varies widely depending on the nature of the infection and the potential for spread. This framework outlines the strategic response at London level and aims to support the local response when required.

Objectives of the Human Infectious Diseases Framework

- 1.6 The objectives of this framework are:
- To give an overview of the health and wider multi-agency response to an infectious diseases outbreak;
 - To identify areas where wider multi-agency assistance may be required;
 - To outline the roles and responsibilities of key agencies in the event of an infectious disease outbreak; and

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http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4007697

² <http://www.londonprepared.gov.uk/londonplans/emergencyplans/flu.jsp>

- To outline the multi-agency co-ordination of the outbreak, including London communications arrangements.

Audience

- 1.7 This document is intended for all agencies and organisations represented within the London Resilience Partnership who would have a role in planning for and responding to an infectious diseases outbreak.

2 Definitions

Outbreak

- 2.1 An outbreak can be defined as:
- An incident in which two or more people experiencing a similar illness are linked in time/place; and/or
 - A greater than expected rate of infection compared with the usual background rate for the place and time where the outbreak has occurred; and/or
 - A single case of certain rare diseases such as diphtheria, botulism, rabies, viral haemorrhagic fever or polio..

Epidemic

- 2.2 An epidemic is the occurrence of more cases of disease than would be expected in a community or region during a given period. The term is similar to an outbreak, but it usually is used to describe an unusual frequency of illness in a group of people that is not explained by the usual seasonal increases..

Pandemic

- 2.3 A pandemic is an epidemic (a sudden outbreak) that becomes very widespread and affects a whole region, a continent, or the world. As a result of rapid spread from person to person, pandemics can have significant global human health consequences. In addition to the severe health effects, a pandemic is also likely to cause significant wider social and economic damage and disruption.

Emerging Infectious Disease

- 2.4 An emerging infectious disease can be defined as a disease that has recently been recognised or a disease of which cases have increased (or look as though they might be on the increase) over the last 20 years, in a specific place or among a specific population.

Over the past 25 years, more than 30 new or newly recognised, infections have been identified around the world. Most of these are zoonotic - they are naturally transmissible, directly or indirectly, between vertebrate animals and humans. By their very nature, zoonotic infections can be more challenging to monitor.

Although it is unlikely that a new infectious disease would originate in the UK, it is highly probable that one could emerge in another country. Given the ease and speed with which people can travel around the world, it is

therefore possible that a new infection could spread rapidly before it is detected, and be transmitted to the UK. New diseases therefore pose a potential threat to the health of the UK population, and may present social and economic challenges.

Bioterrorism

- 2.5 The term bioterrorism is used to describe a situation in which a biological agent is intentionally released to cause illness. The biological agent involved in bioterrorism may be a living organism or a poison, such as anthrax, ricin, or botulism toxin.
- 2.6 If a group of children and adults become ill with similar symptoms at the same time, the public health authorities should be notified. They will consider bioterrorism as one of the possibilities as well as the more likely event of an outbreak of common infectious disease. Public health officials are likely to be more sensitive to such reports if there are signs of certain rare infections (like anthrax or smallpox) that are unusual as “natural” occurrences.³

³ Excerpted from *Managing Infectious Diseases in Child Care and Schools*, 2nd Edition.

3 Modes of Transmission

- 3.1 Several different classifications exist for the routes of transmission of different infections. These have been generated mostly for the purpose of grouping similar diseases together in handbooks on preventative measures, and none of them is entirely satisfactory. Common classifications include person-to-person spread, air-borne, water-borne, food-borne, and vector-borne infections.
- 3.2 An alternative approach would be simply to divide the infections into those that are transmitted directly or indirectly as per table 1, below:

Direct Transmission	Indirect Transmission
<ul style="list-style-type: none"> * Mucous membrane to mucous membrane – eg Sexually transmitted diseases * Across placenta – eg Toxoplasmosis * Transplants, including blood – eg Hepatitis B * Skin to skin – eg Herpes simplex type 1 * Sneezes, coughs – eg influenza 	<ul style="list-style-type: none"> * Water borne – eg Hepatitis A * ‘Proper’ air borne – eg Chicken-pox * Food borne – eg Salmonella * Vector borne – eg Malaria * Objects – eg Scarlet fever (e.g. on toys in a nursery)

Table 1: Examples of directly and indirectly transmitted infections (Giesecke, 2002)

- 3.3 Most of the infections in the indirect group can also be spread through direct contact. In fact, the diseases that are placed in the ‘indirect’ category are really just the most infectious ones.

4 Types of Outbreaks

- 4.1 Outbreaks can be categorised according to either, or both, the timeframe and numbers of people affected.
- 4.2 In terms of timeframe, categories considered are acute and persisting outbreaks, defined as follows:
- Acute outbreaks lead to a sudden increase in numbers of cases and are often associated with a point source. Examples include Legionnaires disease and gastroenteritis.
- 4.3 Rising Tide outbreaks develop over a number of days and weeks and often involve a disease in which person to person spread is common (with or without an initial point source). For example, Measles
- 4.4 In terms of the magnitude of the outbreak and the numbers of people affected, categories considered are minor and major outbreaks, defined as follows:
- A **minor outbreak** is one that has a limited impact and can normally be investigated and controlled within the resources of the local Health Protection Unit, the Local Authority Environmental Health Services and the appropriate microbiology laboratories. In a minor outbreak investigation and management of the outbreak will require close collaboration between local health professionals. An Outbreak Control Team (OCT) will often be convened. Please see the HPA Infectious Diseases Outbreak Management Plan, page 11⁴
 - A **major outbreak** is defined as one in which a large number of people, or multiple cohorts of people, are affected and may include people in a variety of locations across the region. The organism involved is unusually pathogenic (e.g. diphtheria, viral haemorrhagic fever; etc) and there is potential for transmission to large numbers of people (e.g. widespread distribution of food product, public water supply or point source affecting large numbers). A London Outbreak Management Group would be convened in a major outbreak.

Causes of Infectious Diseases Outbreaks

- 4.4 Outbreaks can be caused by the emergence of diseases by natural events (e.g. Severe Acute Respiratory Syndrome (SARS)) or due to bioterrorism.
- 4.5 Irrespective of the cause of the outbreak, the health response to an infectious diseases outbreak would be managed in the same way, in relation to scale and complexity. If the bioterrorism incident resulted in a major outbreak, different response arrangements may be required of health and wider

partners, and these arrangements do not fall within the scope of this framework.

5 Risk Assessment

5.1 The figure below summarises the types of risks covered in the National Risk Register 2010. It gives an indication of the relative likelihood and impact of these risks.

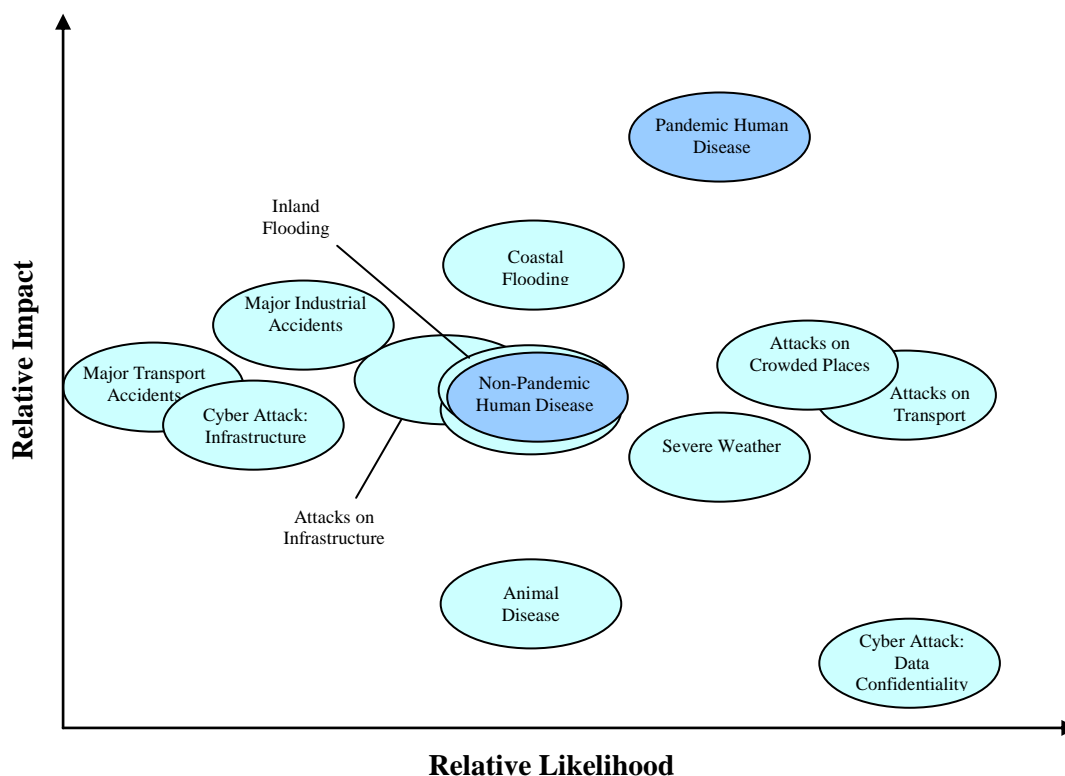


Figure 1: An illustration of the high consequence risks facing the United Kingdom (Cabinet Office, 2010)⁵

- 5.2 The figure above illustrates that human pandemic disease is the highest impact risk on this matrix and that non-pandemic human disease is also assessed as a relatively high impact and likelihood risk.
- 5.3 In line with the National Risk Register, the London Regional Risk Register 2009/10 also assesses non-pandemic human infectious diseases as a high risk.
- 5.4 The London Community Risk Register 2010/11 assesses Emerging Infectious Diseases as a very high risk

⁵ Cabinet Office (2010) *National Risk Register of Civil Emergencies* available at <http://www.cabinetoffice.gov.uk/media/348986/nationalriskregister-2010.pdf>

6 Surveillance and Monitoring

- 6.1 Communicable disease surveillance is the continuous monitoring of the frequency and the distribution of disease, and death, due to infections that can be transmitted from human to human or from animals, food, water or the environment to humans, and the monitoring of risk factors for those infections.
- 6.2 An important purpose of communicable disease surveillance is also to detect the occurrence of outbreaks or epidemics so that immediate action can be taken to identify and control the source (e.g. outbreaks of food poisoning) or so that the health service is prepared to deal with increased numbers of patients (e.g. in a flu epidemic). By monitoring how the number of cases of an infection change over time, it is possible to assess whether control and prevention activities, such as vaccination programmes, are being effective in reducing the frequency of disease and its consequences.
- 6.3 Most surveillance is based on anonymised reports of infection that are submitted from doctors and laboratories to the epidemiologists at the Health Protection Agency's Centre for Infection. These reports are gathered together and analysed to produce information on the frequency (number of cases) and the distribution (who is getting the infection and where they are) of disease. This is done regularly so that outbreaks and epidemics can be detected as soon as they begin, as it is necessary to take immediate action if the spread of an outbreak or epidemic is to be controlled or prevented. The results of these analyses are published in the [Health Protection Report \(HPR\)](#).
- 6.4 Important findings that require immediate action to be taken, such as outbreaks or significant increases in the number of cases in one or more parts of the country, are also communicated directly to doctors working in laboratories, public health departments, hospitals and general practice in the relevant areas, and to the Department of Health if necessary.⁶
- 6.5 Certain diseases must be reported by law to the HPA, these are termed 'notifiable'.⁷ See Appendix B for a full list and link in footnote to website for more detailed information.

Monitoring potential outbreaks

- 6.6 Initial identification of an outbreak is sometimes difficult. In some outbreaks this may be immediately obvious, but infection occurring in individuals or groups where the infection has a long incubation period, for example tuberculosis, may go unrecognised for some time.
- 6.7 An outbreak of infection is an unusual increase in cases where the same symptoms or the same micro organisms are isolated, which share a common

⁶<http://www.hpa.org.uk/HPA/ProductsServices/InfectiousDiseases/ServicesActivities/1158313434400/>

⁷http://www.legislation.gov.uk/ukxi/2010/659/pdfs/ukxi_20100659_en.pdf

route of transmission. The cases are likely to be associated in time and/or place. The management of any outbreak will depend on the infectious nature of the pathogen, the number of cases, and the severity of the illness of the cases.

- 6.8 Any incident which may have the potential to develop into an outbreak will be monitored closely and discussed between the HPU Lead Consultant in Communicable Disease Control (CCDC)/Consultant in Health Protection (CiHP) and any relevant partners e.g the NHS Trust Infection Control Doctor (ICD) or Infection Control Nurse (ICN), the Director of Public Health (DPH), Environmental Health Officers (EHO's) and the trust Consultant Microbiologist/ Virologist.
- 6.9 The lead at the HPA will conduct a risk assessment with relevant colleagues, often in the context of an outbreak control team. Depending on the outcome, a decision will be made on further action required. Several issues need to be assessed, including the numbers of people affected, whether the diseases or incident pose a risk to health for the population in question, whether exposure/transmission of an organism is likely to be continuing, whether unexpected cases have appeared across one or more Local Authority or PCT area, and whether the disease is unusual.

7 Notification

- 7.1 Health protection legislation in England has been updated to give public authorities new powers and duties to prevent and control risks to human health from infection or contamination, including by chemicals and radiation. The revised measures are contained within the amended Public Health (Control of Disease) Act 1984 and its accompanying Regulations. The new Regulations for clinical notifications came into force on 6 April 2010, and those relating to laboratory notifications start on 1 October 2010. The new legislation adopts an all hazards approach, and, in addition to the specified list of infectious diseases, there is a requirement to notify cases of other infections or contamination which could present a significant risk to human health.⁸ See Appendix C for further detail on the Regulations.
- 7.2 Doctors in England and Wales have a statutory duty to notify a 'Proper Officer' of the Local Authority of suspected cases of certain infectious diseases. The attending Registered Medical Practitioner (RMP), should fill out a notification certificate immediately on diagnosis of a suspected notifiable disease and should not wait for laboratory confirmation of the suspected infection or contamination before notification. The certificate should be sent to the Proper Officer within three days or verbally within 24 hours if the case is considered urgent. HPU CCDC's/CiHP are the 'Proper Officers for the Local Authorities and they receive the Notification of Infectious Diseases (NOIDS) either directly from the RMP or via the LA.
- 7.3 The Proper Officers are required to pass on the entire notification to the HPA within three days of a case being notified, or within 24 hours for cases deemed urgent. Health Protection Units (HPU) are the primary recipient within the HPA of clinical notifications from Proper Officers⁹.
- 7.4 The Information Management & Technology Department within the HPA Centre for Infections (CfI) collate the returns at the national level, and publish analyses of local and national trends on a weekly basis.¹⁰
- 7.5 The prime purpose of the notifications system is speed in detecting possible outbreaks and epidemics. Accuracy of diagnosis is secondary, and since 1968 clinical suspicion of a notifiable infection is all that is required.

⁸ http://www.hpa.org.uk/infections/topics_az/noids/noidlist.htm

⁹ http://www.opsi.gov.uk/si/si2010/draft/ukdsi_9780111490976_en_1

¹⁰ <http://www.hpa.org.uk/HPA/Topics/InfectiousDiseases/InfectionsAZ/1191942172952/>

8 Control Measures

- 8.1 In order to slow transmission of a disease, control measures may be implemented by public health responders, dependent on the risk assessment of the disease. Control measures may include:
- Containment or removal of the source e.g food, etc.,
 - Isolation/Exclusion
 - Infection control measures, such as respiratory etiquette, hand hygiene the use of appropriate personal protective equipment, environmental cleaning, waste and linen management
 - Social distancing strategies (e.g. cancellation of public gatherings, school closures)
 - The use of drug's to prevent infection and reduce infectivity
 - Vaccination
- 8.2 Isolation refers to the separation of a symptomatic patient with a communicable disease from other persons in an attempt to reduce the infectious risk that person poses to other people in the community.
- 8.3 Exclusion refers to the separation from others or the restriction of movement of individuals or groups who are not ill but who have likely been exposed to an infectious agent. The purpose of exclusion is to reduce the potential spread of the agent throughout a community. The use of exclusion measures is not appropriate in all circumstances and depends on the incubation period of the disease and the length of time for which a person is infectious before becoming symptomatic.
- 8.4 Whilst it might be possible to isolate initial cases and exclude their immediate contacts, such an approach will become unsustainable after a certain period of time.. Nevertheless, such measures can prove useful in slowing the spread and providing time for preparations to be put in place.
- 8.5 It is likely that isolation and quarantine will take the form of voluntary home isolation and quarantine whereby symptomatic patients are advised and encouraged to stay at home or in their place of residence whilst ill and to minimise social and family contact.
- 8.6 Geographic quarantining measures ('cordons sanitaires') may be used in an attempt to isolate affected communities but, again, this would be dependent on the risk profile of the disease.
- 8.7 Certain types of infectious diseases will spread rapidly in closed establishments such as prisons, residential homes and boarding schools where people are in close contact and where they may also be in higher-risk groups. Such establishments may also be more vulnerable to higher levels of staff absence, supply disruption or transport difficulties.
- 8.8 In order to reduce the risk of catching and spreading the disease, people should adopt infection control measures, such as adopting high standards of personal hygiene and avoiding unnecessarily close contact with others.

- 8.9 Social distancing strategies such as the cancellation of public gatherings may be used, but careful consideration of the benefits of such strategies would be required. In relation to pandemic influenza, for example, there is little direct evidence of the benefits of cancelling large gatherings or events.¹¹ It is often more sensible to strongly advise symptomatic individuals to avoid public situations whilst symptomatic.
- 8.10 School closures may be used as a means of limiting the spread of the disease, dependent on the virulence and severity of the disease. Decisions on whether to close schools will need to be weighed against the disruption to education and the negative effect on services and businesses. The decision whether to close will be made by the HPU with the LA.
- 8.11 Drug treatment and prophylaxis as well as vaccination may also be used in containing an outbreak of infectious disease.

Removal of Source

- 8.12 In the event of the infectious disease outbreak, contact must be made with the **Environment Agency** as soon as practicably possible to discuss means of disposing of any generated clinical waste. Normally this waste must be incinerated but as large quantities may be generated this may exceed the current capacity available within the London area. Alternative methods are available and can be discussed with the Environment Agency.
- 8.13 In the event of a Gold Command and STAC being activated then this is the format to discuss with the Environment Agency representative waste disposal means.
- 8.14 In the event of Gold Command not being called, the appropriate waste team, PPC Environment Agency South East, area 1, can be reached via our customer contact centre on 08708 506 506 during the hours of 9am to 5pm.
- 8.15 In the hours of 5pm to 9am please call our Incident Communication Services on 0800 807060 and ask for the information to be passed to the Environment Management Duty Officer, Area 1.
- 8.16 Both of these routes will result in someone calling back to discuss means to dispose of the generated clinical waste

¹¹ Department of Health & Cabinet Office (2007), *Pandemic Flu: A national framework for responding to an influenza pandemic*, p.80.

9 Treatment/Prophylaxis

Countermeasures

- 9.1 The targeted and effective use of pharmaceutical interventions is an important countermeasure, but the supply/availability will be dependent on the specific disease. For example, for many rare and exotic diseases there is a limited supply pharmaceutical interventions available in the country..
- 9.2 Nevertheless, when used appropriately, pharmaceutical treatment can be used to reduce the length of symptoms and usually their severity. The prompt use of appropriate medicines will benefit individual patients and may also produce public health benefits by decreasing the overall clinical attack rate, shortening the period that individuals are able to shed virus and thus able to pass on the infection to others.
- 9.3 Should mass distribution of pharmaceutical countermeasures be required, the National Health Service (NHS) will put in place an appropriate operational distribution strategy. This will usually be through existing health facilities; however, local variation may determine that other facilities are more appropriate, for example, centres held by the respective local authority.
- 9.4 The HPA is likely to implement measures to monitor the susceptibility of the organism to medicines, assess their effectiveness in reducing complications and deaths and inform policy decisions. The Medicines and Healthcare products Regulatory Agency (MHRA) will identify the incidence and patterns of any adverse reactions.
- 9.5 It is also possible to use pharmaceutical countermeasures as a preventive measure (prophylaxis) to protect against infection. Although some prophylactic use may help contain spread from initial cases and thus slow the development of the disease, the effectiveness of this measure will depend on the disease and organism in question. An alternative may be 'household prophylaxis', which provides post-exposure prophylaxis to immediate contacts at the same time as treating a symptomatic patient on the grounds that some of the contacts may already be incubating the infection. This could mitigate and delay the progress of the disease.
- 9.6 Pre-exposure prophylaxis, providing medicine to individuals in advance of possible exposure, is also a possible use of pharmaceutical countermeasures in response to an infectious disease outbreak.

Vaccination

- 9.7 If a vaccine exists, the NHS will put in place arrangements to provide the vaccine to those individuals assessed as being at risk. If mass vaccination is required, the NHS will put in place an appropriate operational vaccination strategy. Vaccination will be delivered at the local level, in co-ordination with local partners.

- 9.8 If a vaccine does not exist, it is unlikely that it will be possible to develop a matching vaccine in a short time frame; therefore, other treatment options will need to be explored.

Hospital Admission

- 9.9 Individuals may need to be referred to hospital, dependent on the severity of the disease. Generally, bed utilisation is high and analysis suggests that it would be possible to release about a third of the total acute bed capacity within five to 10 days of any decision to cease elective work, if such a decision was required.¹² The NHS has plans in place for developing surge capacity should this be required.
- 9.10 Rare and exotic diseases (probable and confirmed), such as the Viral Haemorrhagic Fevers (VHF) and other hazard category 4 infectious pathogens, will be managed in an NHS High Security Infectious Diseases Unit. This is a specially designed self contained, negative pressure unit in an NHS hospital. The facility also contains a medium secure assessment unit, where suspected cases, following risk assessment, can be admitted.
- 9.11 Other diseases specified by the Department of Health should also be managed in the High Security Infectious Diseases Unit. These include Kayasanur Forest Disease, Venezuelan (guanarito) haemorrhagic fever (HF), Omsk HF, Argentine (junin) HF, Russian Spring Summer Encephalitis, Bolivian (Machupo) HF, Nipah, Brazilian (Sabia) HF, Hendra, Smallpox and Herpes virus simiae (B virus)

¹² Department of Health & Cabinet Office (2007), *Pandemic Flu: A national framework for responding to an influenza pandemic*, p.105.

10 Response Arrangements

Local Arrangements (Single/Dual agency)

Outbreak Control Team

- 10.1 Once an outbreak has been declared the HPA and NHS will convene an Outbreak Control Team and will request representation from other organisations, as appropriate. For example, the Local Authority for environmental health issues and the police if malicious intent is suspected.
- 10.2 The Outbreak Control Team will report to the London Outbreak Control Team, if this is convened - usually if affecting more than one area/sector or if declared a HPA Level 2 or more incident. .

See the HPA London Infectious Disease Outbreak Management Plan v3.5, June 2011 for further detail and a generic toolkit for outbreaks.¹³

Membership of the Outbreak Control Team

- 10.3 Membership will vary dependent on the circumstances and not all those listed are expected to attend every meeting. The team would normally include the following core members:
- HPU Incident/Outbreak Lead (CCDC)
 - The appropriate Environmental Health Officer/s (EHO/s)
 - Consultant Microbiologist (NHS and/or HPA Collaborating Centre)
 - Health Protection Nurse (HPN)/Specialist (HPS)
 - PCT Director of Public Health (DPH) or delegated representative
 - Surveillance and Information Officer
 - Nominated communications team member from either PCT, HPA London and/or LA. The communications lead is agreed between agencies involved.
 - Administrative and secretarial support as appropriate (provided by the HPU/LA/PCT)

London Arrangements (Multi Agency Partnership)

London Outbreak Management Group

- 10.4 It is anticipated that a London Outbreak Management Group (LOMG) would be convened in a major outbreak. However the final decision will be based on clinical assessment of the situation.

Membership of the London Outbreak Management Group

- 10.5 Membership will vary dependent on the circumstances and not all those listed are expected to attend every meeting. The team would normally include the following core members:
- CCDC
 - The appropriate Environmental Health Officer/s (EHO/s)
 - Consultant Microbiologist (NHS and/or HPA Collaborating Centre)
 - Administrative and secretarial support as appropriate (provided by the HPU/LA/LRT)
 - Health Protection Nurse (HPN)/Specialist (HPS)
 - Director of Public Health (DPH) or delegated representative
 - Nominated communications team member from either NHS London, HPA London and/or LA. The communications lead is agreed between agencies involved.
- 10.6 Dependent on the nature and size of the outbreak / incident others may need to be invited to be members of the LOMG. Possible inclusions for the LOMG are:
- HPA Regional Epidemiologist or other specialist (senior scientist) from the London Region or Centre for Infections (CfI)
 - HPA Regional Director
 - Other Environmental Health Staff
 - NHS London
 - Senior manager of any institution involved
 - Immunisation Co-ordinator
 - Pharmaceutical Advisors
 - Food Chemist (a Public Analyst appointed in accordance with the Food Safety Act 1990)
 - Food Microbiologist (a food examiner in accordance with the Food Safety Act 1990)
 - HPA CfI FWE lab
 - HPA CfI water / Legionella specialist scientists
 - Virologist
 - Toxicologist
 - Member of the State Veterinary Service/Veterinary Laboratory Agency or Animal Health
 - Water Company representative(s)
 - Representative from the Health and Safety Executive
 - Representative from the Environment Agency
 - Representatives from the Food Standards Agency
 - Relevant physicians/nurses/other health and social care professionals
 - Legal adviser (HPA, PCT or LA as appropriate)
 - London /local HEPA
 - Representative from School/Headteacher
 - Others as appropriate.
- 10.7 If an outbreak / incident is likely to lead to significant numbers of individuals needing hospital care then professional and management representation from hospital trusts is likely to be needed.

Strategic level

Tripartite Discussion

- 10.8 This will allow for discussion and assessment between the raising agency, LRT/GLA on call officer and on call Metropolitan Police Service (MPS) Emergency Preparedness OCU Senior Manager.
- 10.9 The outcome of the discussion will include either the decision to convene a Partnership meeting or to monitor the situation and keep the London Resilience Partnership apprised.
- 10.10 It will be vital to obtain details concerning the rate and extent and location of the outbreak. A discussion concerning whether the incident can be managed within the Health Services response arrangements and capabilities will need to take place.

Strategic Level - London Resilience Partnership meeting

- 10.11 The decision to convene a Partnership meeting will be taken by the members of the initial Tripartite Discussion. However, the urgency of the situation may call for a Partnership meeting immediately.
- 10.12 Whilst most incidents are dealt with by local responders at a local level, a Partnership Meeting may be convened where the response to a disruptive incident may benefit from some co-ordination, discussion or further assessment or enhanced support at a London level.
- 10.13 A Partnership meeting may be useful in the early stages of a 'rising tide' event to determine whether further coordination is required.
- 10.14 The need for this meeting can either be decided by the London Resilience Team duty director, at the request of responders, or by the Metropolitan Police. The Partnership Meeting would normally be chaired by the London Resilience Team unless other wise agreed and the London Resilience Team would also provide secretariat to these meetings.
- 10.15 The role of the Partnership meeting is to:
- Save lives and reduce the impact on the health of Londoners
 - Develop a shared understanding of the evolving situation (including horizon scanning);
 - Assess the impact of the disruptive incidents actual and/or potential impact;
 - Review the steps being taken to manage the situation, and any assistance that may be needed/ provided;
 - Identify any issues which can not be resolved at local or London level and need to be raised at national level (e.g. niche capability gaps).

Triggers for Activation

- 10.16 As a guide, the calling of an Incident Team or Outbreak Control Team (OCT) will be considered when one or more of these conditions apply:

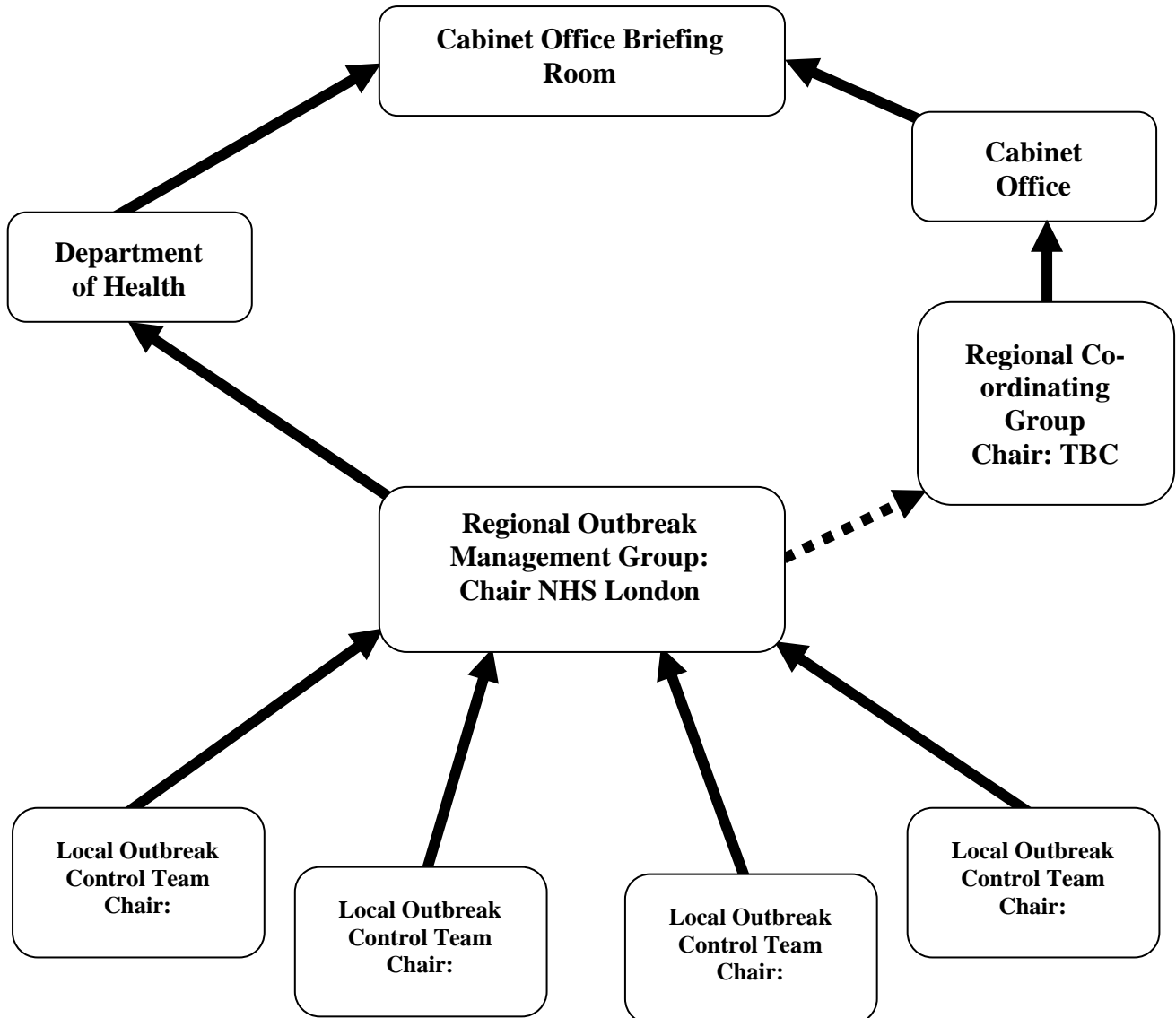
	The disease poses an immediate Health Hazard to the local population
--	--

	There is a significant number of cases
	The disease is important, in terms of its severity or capacity to spread
	Cases have occurred in a high risk establishment eg schools, hotels, hospitals, nursing homes and residential homes, guest houses and food premises.
	Media interest

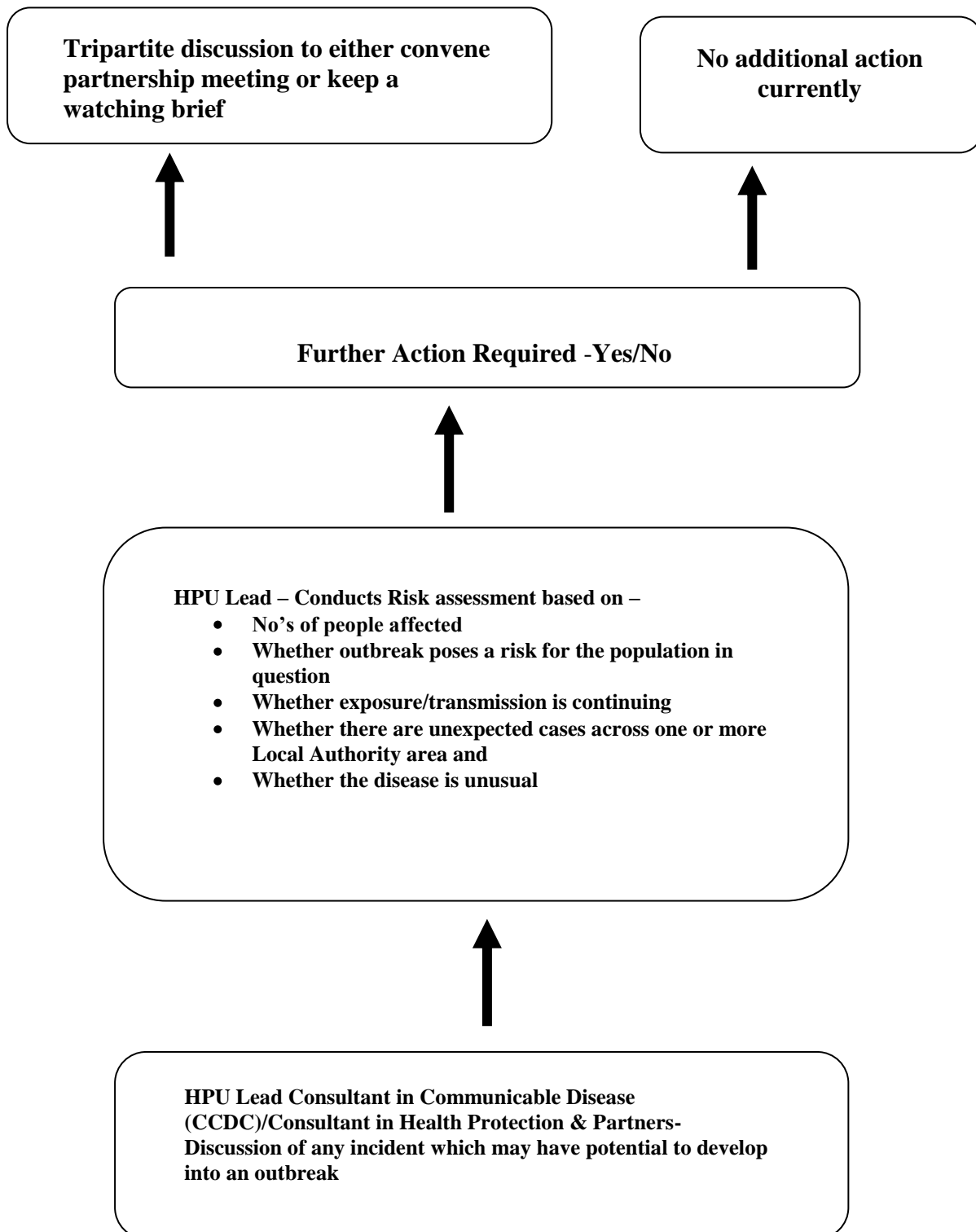
The London Resilience Partnership Human Infectious Diseases Framework will be triggered when :

	One or more agencies which make up the London Resilience Partnership initiate a Tripartite discussion to assess the requirement for multiagency support
	As a result of this discussion and assessment of the situation, a decision is made to convene a Partnership Meeting or to monitor the situation and keep the London Resilience Partnership apprised

National and London Information Flows during an Infectious Diseases Outbreak



Monitoring an Incident



Roles and Responsibilities

HPA

- 10.17 The functions of the Agency are:
"to protect the community (or any part of the community) against infectious diseases and other dangers to health" (HPA Act 2004)
- 10.18 In addition to the Agency's role in reducing the dangers to health from infections, chemical and radiation hazards, it also provides support to, and works in partnership with others who also have health protection responsibilities and advises, through the Department of Health, all government departments and devolved administrations throughout the UK. In England, it provides the local health protection services which in the rest of the UK are delivered by the three other lead health protection bodies; the National Public Health Service Wales; Health Protection Scotland HPS; the Department of Health, Social Services and Public Safety, Northern Ireland. The Agency works closely with all these organisations.
- 10.19 At the UK level, the Agency is responsible for providing information and services to support a co-ordinated and consistent UK public health response to national level emergencies.
- 10.20 The HPA carries out a broad spectrum of work relating to prevention of infectious disease. This includes
- infectious disease surveillance,
 - providing specialist and reference microbiology and microbial epidemiology,
 - co-ordinating the investigation and cause of national and uncommon outbreaks,
 - helping advise government on the risks posed by various infections and
 - responding to international health alerts.
- 10.21 The Health Protection Agency in London are responsible for the HPA London Infectious Disease Outbreak Management Plan¹⁴

The NHS

- 10.22 The NHS has responsibility for diagnosing, treating and caring for people with infectious diseases. The majority of these services are in primary care, with others in clinics, such as genitourinary or HIV and AIDS services. These are backed up by specialist infectious diseases units with special

isolation facilities, including two high security isolation units in London for the management of patients with highly infectious dangerous pathogens.

- 10.23 The NHS also has responsibility for improving and protecting the health of populations. One strand of this population health (or public health) function relates to infectious diseases. Essentially the NHS is responsible for:
- With the HPA, surveillance/monitoring of infectious diseases ;
 - Organising effective programmes to prevent the transmission of infectious diseases (e.g. implementing national policies such as immunisation programmes);
 - Working with local authorities, the HPA and other government agencies to manage local outbreaks to establish their cause, to reduce their impact and further spread of the disease;
 - Reducing the risk to patients from infectious diseases in health care premises and associated with health care interventions;
 - Providing medical support to local authorities to enable them to discharge their responsibilities under public health legislation;
 - Ensuring proper diagnostic and treatment facilities for people with infections (including isolation facilities for those with highly infectious diseases).
- 10.24 In practice, day-to-day management responsibility rests with a team led by a Consultant in Communicable Disease Control based within the Health Protection Agency. In hospitals, the primary responsibility for infection control rests with the Infection Control Team.
- 10.25 The Director of Public Health - NHS London is, amongst other responsibilities, accountable for the protection of health (including against infectious diseases and environmental hazards) across the region. There is an effective public health function at local level and involving strategic health authorities and public health networks. Networks are necessary for proper delivery of specialist areas of public health.

Local authorities

- 10.26 Local authorities play an important role in infection control. Public health legislation, in particular the Public Health (Control of Disease) Act 1984, places some responsibilities and powers for infection control on local authorities. Each local authority is required to appoint a Proper Officer. The Act gives local authorities' discretion as to who this should be, but guidance from central government has long been that this should be the local Consultant in Communicable Disease Control. Some diseases must be notified to the Proper Officer¹⁵ and Proper Officers are given various powers of investigation and control but only in regard to those specified diseases.
- 10.27 In practice, the main work of local authorities in infection control relates to those infections which are environmental in origin (food, vector or water-

¹⁵ See appendix B

borne). The investigation of outbreaks, for example, of food poisoning and the prevention of spread of diseases in the community is carried out by Environmental Health Officers (EHOs) working with the HPU and laboratories.

- 10.28** There has been a lack of clarity about the roles and responsibilities in infection control between local authorities and health authorities although this is tempered by practical working arrangements. In the main, these problems derive from the rigidity of the legislation which has not been reviewed for many years and especially in the light of NHS changes.
- 10.29** The 1984 Act does not codify the responsibilities of the different organisations. Rather, it confers certain reserve powers (these issues are discussed in more detail later in this chapter). Certain diseases are not properly covered or investigative roles made clear e.g. E coli O157 acquired from animals, or tuberculosis which may be infectious and carried by someone in the community and difficult to track or trace.
- 10.30** Many of the activities of local authorities for example planning and building controls over drainage and design of buildings and their waste management functions have in their historic origins the control of the spread of infection through hygienic design and management.

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/Browsable/DH_4985785

APPENDICES

Appendix A

Infectious Diseases¹⁶

CJD

Creutzfeldt-Jakob disease (CJD) is a rare and ultimately fatal degenerative brain disease. It is one of a group of diseases called Transmissible Spongiform Encephalopathies (TSEs) that affect humans and animals. TSEs are thought to be caused by the build up in the brain of an abnormal form of the naturally occurring 'prion' protein

CJD was initially described in its classical, or sporadic form, in 1920. A new variant known as variant CJD (vCJD) was first identified in 1996. Variant CJD is strongly linked to exposure, probably through food, to a TSE of cattle called Bovine Spongiform Encephalopathy (BSE). Most (85%) cases of CJD are sporadic, with no known cause, and occur worldwide at a rate of about 1 case per million population per year. There are also inherited forms of CJD (10-15%) and those which have been acquired from another source.

Acquired CJD includes iatrogenic CJD and vCJD. Iatrogenic CJD is very rare, and occurs when CJD is accidentally transmitted during medical or surgical procedures. Although there have been no reported cases of vCJD having been transmitted as a result of surgical procedures, the possibility cannot be ruled out. Precautionary measures have been taken to reduce such a risk by improving the standards of decontamination services for surgical instruments. HPA -

<http://www.hpa.org.uk/web/HPAweb&Page&HPAwebAutoListName/Page/1191942152861>

CJD is a fatal brain disease first classified in the 1920s. In 1996, doctors reported a variant of the disease, vCJD. Research since suggests that vCJD is the result of exposure to the agent that causes Bovine Spongiform Encephalopathy (BSE) in cattle DH -

<http://www.dh.gov.uk/en/Publichealth/Communicablediseases/CJD/index.htm>

Diphtheria

Diphtheria is an acute infectious disease caused by the bacterium *Corynebacteria diphtheriae* affecting the upper respiratory tract and occasionally the skin. It is characterised by an inflammatory exudate, which forms a greyish membrane in the respiratory tract. Virulent strains of *C. diphtheriae* produce a toxin, which can damage heart and nervous tissues. Spread is by droplet infections and through contact with articles soiled by infected persons. An effective vaccine against the disease was introduced in 1940.

DH -

<http://www.dh.gov.uk/en/Publichealth/Communicablediseases/Diphtheria/index.htm>

¹⁶ <http://www.dh.gov.uk/en/Publichealth/Communicablediseases/CJD/index.htm>

Hepatitis A

Hepatitis A virus infection causes a range of illness from mild through non specific nausea and vomiting through to hepatitis (liver inflammation, jaundice, or icterus) and rarely liver failure. Symptoms and severity of the illness are generally worse the older the person is when they become infected.

Hepatitis A virus was a common childhood infection in the early 20th Century but now in the 21st century it is an unusual infection in the UK. It is normally spread by the faecal-oral route but can also be spread occasionally through blood. Infection is prevented by good hygiene, especially hand washing, safe drinking water and food. Vaccination, passive or active, can be used to prevent groups at high risk including people who have been in contact with someone else who has the infection, travellers to countries where the infection is common, and other groups such as injecting drug users.

<http://www.hpa.org.uk/webw/HPAweb&Page&HPAwebAutoListName/Page/1200660055580?p=1200660055580>

Hepatitis B

The hepatitis B virus (HBV) causes inflammation of the liver. The virus is transmitted by contact with infected blood

<http://www.hpa.org.uk/webw/HPAweb&Page&HPAwebAutoListName/Page/1191942171112?p=1191942171112>

Hepatitis C

People infected with hepatitis C virus often show no symptoms initially, but long term effects can include liver damage (cirrhosis and liver cancer). The virus is transmitted mainly through contact with the blood of an infected person, and drug users who share injecting equipment are at particular risk. Babies can also be infected by their mothers during birth. No vaccine exists to prevent hepatitis C infection, but treatments are available that are effective in over 50% of cases.

<http://www.dh.gov.uk/en/PublicHealth/Communicablediseases/HepatitisC/index.htm>

Pertussis

Pertussis, or whooping cough, is a highly infectious bacterial disease caused by *Bordetella pertussis*. It is spread by droplet infection, and has an incubation period of seven to ten days. The most recognisable symptom is an irritating cough that develops into coughing fits. In young infants, the characteristic 'whoop' may never develop and coughing spasms may be followed by periods of apnoea (breathing difficulty). Immunisation for pertussis was introduced in the 1950s.

<http://www.dh.gov.uk/en/PublicHealth/Communicablediseases/Pertussis/index.htm>

Tuberculosis

Tuberculosis (TB) is an infectious disease caused by the bacterium *Mycobacterium tuberculosis*, also known as 'the tubercle bacillus'. TB commonly affects the lungs, but can reach any part of the body. It is usually spread by the coughs or sneezes of an infected person, but is not highly contagious. Prolonged close contact with a person with TB—for example, living in the same household—is usually necessary for infection to be passed on. It may take many years before someone infected with TB

develops the full disease. TB worldwide is a massive problem. In England cases fell progressively until the mid-1980s but started to rise again in the early 1990s. In 2006, there were 8497 cases of TB reported in the UK (14.0 per 100,000) and the London region accounted for 40 per cent of cases (44.8 per 100,000). TB is curable with a course of special antibiotics taken for at least 6 months. The most important part of controlling TB is identifying and treating those who already have the disease, to shorten their infection and to stop it being passed on to others

<http://www.dh.gov.uk/en/PublicHealth/Communicablediseases/Tuberculosis/index.htm>

E. coli O157

E. coli O157 (also known as VTEC) is a type of bacteria called Escherichia coli, of which O157 is the most common in the UK. It can cause a range of symptoms, from mild diarrhoea to severe abdominal pain and bloody diarrhoea.

In a small proportion of patients (2-7%, and mainly children), it can cause haemolytic uraemic syndrome (HUS), which is a serious condition resulting in kidney failure.

After being infected by the E. coli bacteria it usually takes three to four days before symptoms develop, but it can be between one and 14 days.

Symptoms can last up to two weeks, but severe complications such as HUS can last longer. Most people rid themselves of the bacteria after about a week, although some people, particularly children, may carry E. coli O157 for several months after they have got better.

http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1254510413069

The most important VTEC strain to cause illness in the UK is E. coli O157, which will be referred to below as VTEC O157. This can be found in the intestine of healthy cattle, sheep, goats and a wide range of other species. Humans may be infected by VTEC O157 or other VTEC strains when they consume food or water that has become contaminated by faeces from infected animals. Infection may also result from direct or indirect contact with animals that carry VTEC or from exposure to an environment contaminated with animals faeces, such as farms and similar premises with animals which are open to the public. In these cases the bacteria are transferred from contaminated material to the mouth when proper hand hygiene advice is not followed. The infectious dose of VTEC O157 is very low at less than 100 bacterial cells. Infection is readily spread between family contacts, particularly those who may be caring for infected children, and in settings such as children's day nurseries.

<http://www.hpa.org.uk/HPA/Topics/InfectiousDiseases/InfectionsAZ/1203928714829/>

Smallpox

Is a highly contagious and frequently fatal viral characterised by a biphasic fever and a distinctive skin rash that leaves the skin pocked mark. The disease is caused by the variola virus. The majority of patients recover, however death does occur in up to 30% of cases.

Smallpox is transmitted from person to person by infected aerosols and air droplets spread from one person to another by infected saliva droplets spread in face to face contact with an infected person after fever has begun. The disease can also be

transmitted by contaminated clothes and bedding, though the risk of infection from this source is much lower. People are most infectious during the first week of the illness.

The global eradication of smallpox occurred in December 1979. This was based on intense verification activities carried out by WHO.

There is no evidence of a specific threat of smallpox attack on the UK. However, it is sensible and prudent to ensure that the NHS can deal effectively with any potential threat. This link provides information on the latest guidance for smallpox preparedness.

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationPolicyAndGuidance/DH_4070830

Legionella

People become infected when they inhale legionella bacteria which have been released into the air from a contaminated source. Once in the lungs the bacteria multiply and cause either pneumonia or a less serious flu like illness.

The bacteria are widely distributed in the environment and can live in all types of water including both natural and artificial water sources. They only become a risk to health when the temperature allows the legionella to grow rapidly, such as in water systems which are not properly designed, installed and / or maintained.

Most cases are reported as isolated cases but outbreaks do occur. Everyone can be affected but the disease mainly affects people over 50 years of age, and generally men more than women, smokers and the immunocompromised are at a higher risk. The early symptoms of Legionnaires' include flu-like illness with muscle aches, tiredness, headache, dry cough and fever. In some rare cases people may develop symptoms as late as three weeks after exposure. Death occurs in 10-15% of the general population and maybe higher in some groups of patient.

Control and prevention of the disease is through treatment of the source of the infection, i.e. by treating the contaminated water systems, and good design and maintenance to prevent growth in the first place.

Severe acute respiratory syndrome (SARS)

The symptoms for SARS first appeared in China in 2002. Due to international air travel, SARS spread around the world and it wasn't until July 2003 that WHO was able to declare the outbreak contained. By this time 8,098 people had been infected, 9.6 percent of whom died. Four more outbreaks were reported between July 2003 and May 2004 all of which were contained with three being linked to laboratory releases of the virus.

The main symptoms of SARS is a high fever, dry cough, breathing difficulties headache, muscle aches and stiffness

These symptoms are typical of many severe respiratory infections. There have only ever been a few cases of SARS reported in the UK, so if you've similar symptoms, it's far more likely to be a more typical form of pneumonia. Even if you've recently returned from south-east Asia, there's little risk that you have SARS as the virus has been contained.

Causes and risk factors

It took scientists several months to identify the cause of SARS, but eventually it was identified as a viral infection with a previously unknown type of coronavirus now known as SARS CoV.

Coronaviruses cause infections of the upper respiratory tract and are spread like the common cold. They are also quite tough and can survive in the environment for at least three hours.

Most new infectious diseases in humans come from animals, and this is thought to be the case with SARS. SARS CoV has been found in Himalayan palm civets, a racoon dog and a Chinese ferret badger. It has also been detected among people working in a live animal market in the area where the outbreak first began, and high levels of antibody to the virus have been found in people trading masked palm civets.

You're unlikely to catch SARS. For it to spread there must be close contact with an infected person. It's less infectious than flu, and has a short incubation period of two to seven days. People with SARS are most likely to be infectious once they have active symptoms of the disease, such as fever and cough. However, it's not known how long before or after symptoms begin that a person remains infectious.

Although SARS is currently contained, people travelling to the area where it first appeared may want to check with the World Health Organisation or Foreign & Commonwealth Office for the latest advice.

Anyone who develops serious illness or breathing problems with fever and cough, especially after travelling abroad, should get urgent medical advice.

Treatment and recovery

So far, no specific treatment appears to be especially effective against SARS. Antiviral drugs such as ribavirin (given with or without steroids) were used in a number of cases in the 2003 outbreak, although it isn't clear how effective they were. With supportive care, the majority of patients started to show improvement by day six or seven of infection. About ten per cent of patients got rapidly worse and needed mechanical help (that is, a ventilator) to breathe. In this group, other illnesses tended to complicate the infection and it was more likely to prove fatal.

Flu (pandemic & epidemic)

An influenza pandemic is an epidemic of the influenza virus which spread on a worldwide scale and infects a large proportion of the population. Unlike regular seasonal epidemics of influenza, pandemics occur irregularly, with the 1918 flu pandemic being the most serious in recent history. Pandemics can cause high levels of mortality, with the 1918 pandemic estimated being responsible for the deaths of over 50 million people.

An influenza pandemic occurs when a new strain of the influenza virus is transmitted to humans from another animal species. Species that are thought to be important in the emergence of new human strains are pigs, chickens and ducks. Any new strain would be unaffected by the immunity people may have to older strains of human

influenza and can therefore spread extremely rapidly and infect very large numbers of people.

The World Health Organisation (WHO) has produced a six stage classification that describes the process by which the new strain moves from the first few infections through to a pandemic. On 11 June 2009 a new strain of H1N1 influenza was declared to be a global pandemic (Stage 6) by WHO. WHO stated 206 countries and overseas territories officially reported over half a million confirmed cases of the H1N1 virus, including 6,250 deaths.

Viral Haemorrhagic Fevers¹⁷

The following information is a quote from the Advisory Committee for Dangerous Pathogens Guidance on the Management and Control of Viral Haemorrhagic Fevers.

“Viral Haemorrhagic Fevers (VHF) are severe and life threatening diseases caused by a range of viruses. Most are endemic in a number of parts of the world, most notably Africa, parts of South America and some rural parts of the middle East and Eastern Europe. However, environmental conditions in the UK do not support the natural reservoirs or vectors of any of these diseases. Although cases of VHF are occasionally imported into the UK, the risk of epidemic spread in the general population is negligible.

There is a risk of spread of infection with these diseases, particularly amongst hospital and laboratory staff. Accidental inoculation may result from needle stick or contamination of broken skin or mucus membranes by infected blood or body fluids. Strict infection control precautions are required to protect those who may be exposed”

Four agents of VHF are of concern in the UK because of possible person to person spread. These are Lassa, Ebola, Marburg and Crimean-Congo Haemorrhagic Fevers.

Lassa Fever

Primary infection in man probably occurs when broken skin or mucus membranes are contaminated with urine from the natural host of the virus, the multi-mammate rat in Africa. Variation in virulence has been observed, and in hospital outbreaks in West Africa, there have been mortality rates of 60%.

Ebola.

There have been cases in The Republic of Congo, Sudan, Cote d'Ivoire, Uganda and Gabon. The natural reservoir of Ebola virus is unknown, but monkeys may be a link to humans. In an outbreak in The Republic of Congo in 1995 the mortality rate was 77%. More than 50% of those affected were hospital or home based carers of Ebola cases.

¹⁷ High Security and Medium Security Infectious Diseases Unit – Internal & external operational policy. (2010)

Marburg

Marburg was first described when laboratory workers in Germany and the former Yugoslavia became infected. All cases were traced either to direct contact with blood, organ or cell cultures from a batch of African Green Monkeys that had been caught in Uganda, or to the blood of the primary human cases. As with the Ebola virus, the natural reservoir of Marburg virus is unknown but acquisition of the infection by monkeys may bring it into contact with man.

Crimean – Congo

CCHF is caused by a virus which is widespread in East and West Africa, Central Asia and the former USSR. More recently CCHF or antibody to it, has been detected in Dubai, Iraq, South Africa, Pakistan, Greece, Turkey, Albania, Afghanistan and India. Transmission is through direct contact with blood or other infected tissues from livestock (domestic animals) or from a tick bite.

Incubation periods and symptoms

The incubation period for these VHF's ranges from 3 – 21 days. Initial symptoms include fever, malaise, headache and muscle and joint pains. Nausea, vomiting and diarrhoea may also occur. Ebola and Marburg often cause a measles –like rash after 4 – 7 days. Obvious bleeding is a later or terminal event. Pyrexia may last up to 2 – 3 weeks with temperature with temperatures up to 41C.

Appendix B

Notifiable Diseases¹⁸

Acute encephalitis
Acute meningitis
Acute poliomyelitis
Acute infectious hepatitis
Anthrax
Botulism
Brucellosis
Cholera
Diphtheria
Enteric fever (typhoid or paratyphoid fever)
Food poisoning
Haemolytic uraemic syndrome (HUS)
Infectious bloody diarrhoea
Invasive group A streptococcal disease and scarlet fever
Legionnaires' Disease
Leprosy
Malaria
Measles
Meningococcal septicaemia
Mumps
Plague
Rabies
Rubella
SARS
Smallpox
Tetanus
Tuberculosis
Typhus
Viral haemorrhagic fever (VHF)
Whooping cough

¹⁸ http://www.opsi.gov.uk/si/si2010/draft/ukdsi_9780111490976_en_1

Yellow fever

Causative Agents¹⁹

Bacillus anthracis
Bacillus cereus (only if associated with food poisoning)
Bordetella pertussis
Borrelia spp
Brucella spp
Burkholderia mallei
Burkholderia pseudomallei
Campylobacter spp
Chikungunya virus
Chlamydophila psittaci
Clostridium botulinum
Clostridium perfringens (only if associated with food poisoning)
Clostridium tetani
Corynebacterium diphtheriae
Corynebacterium ulcerans
Coxiella burnetii
Crimean-Congo haemorrhagic fever virus
Cryptosporidium spp
Dengue virus
Ebola virus
Entamoeba histolytica
Francisella tularensis
Giardia lamblia
Guanarito virus
Haemophilus influenzae (invasive)
Hanta virus
Hepatitis A, B, C, delta, and E viruses
Influenza virus
Junin virus

¹⁹ http://www.opsi.gov.uk/si/si2010/draft/ukdsi_9780111490976_en_1

Kyasanur Forest disease virus
Lassa virus
Legionella spp
Leptospira interrogans
Listeria monocytogenes
Machupo virus
Marburg virus
Measles virus
Mumps virus
Mycobacterium tuberculosis complex
Neisseria meningitidis
Omsk haemorrhagic fever virus
Plasmodium falciparum, vivax, ovale, malariae, knowlesi
Polio virus (wild or vaccine types)
Rabies virus (classical rabies and rabies-related lyssaviruses)
Rickettsia spp
Rift Valley fever virus
Rubella virus
Sabia virus
Salmonella spp
SARS coronavirus
Shigella spp
Streptococcus pneumoniae (invasive)
Streptococcus pyogenes (invasive)
Varicella zoster virus
Variola virus
Verocytotoxigenic Escherichia coli (including E.coli O157)
Vibrio cholerae
West Nile Virus
Yellow fever virus
Yersinia pestis

Appendix C

The Health Protection (Notification) Regulations 2010

- C.1 These Regulations place obligations on various persons to disclose information to specified third parties for the purpose of preventing, protecting against, controlling or providing a public health response to the incidence or spread of infection or contamination.
- C.2 Regulation 2 obliges registered medical practitioners to notify the local authority if a patient they are attending is believed to have a disease listed in Schedule 1 or is otherwise infected or contaminated in a way that may cause significant harm to others.
- C.3 Regulation 3 extends this obligation to cover notification of suspected disease, infection or contamination in a dead body.
- C.4 Regulation 6 obliges the local authority to disclose notifications under regulations 2 or 3 to other specified bodies with a health protection role.
- C.5 Regulation 4 obliges the operators of diagnostic laboratories to notify the Health Protection Agency (HPA) if they identify a causative agent listed in Schedule 2, or evidence of such an agent, in a human sample.
- C.6 Regulation 5 enables the HPA to approach the person who solicited the laboratory tests for certain information not provided by the operator of the diagnostic laboratory and obliges that person to provide the information where known.
- C.7 Regulation 7 enables specified documents to be sent electronically where certain conditions are met.
- C.8 Regulation 8 revokes 2 sets of regulations.
- C.9 A full impact assessment of the effect that this instrument will have on the costs of business, the voluntary sector and the public sector is available from the Department of Health, Room 514, Wellington House, 133-155 Waterloo Road, London, SE1 8UG and is annexed to the Explanatory Memorandum which is available alongside the instrument on the OPSI website (www.opsi.gov.uk).

Appendix D

Agenda Template*²⁰

Insert name of meeting

The next meeting of the above committee will be on
Insert date of meeting (inc. day and year) at insert time
in
insert venue for meeting

Teleconference details: where required

AGENDA

1. Welcome and introductions
 - Apologies for absence
 - Minutes of the previous meeting (if necessary)
 2. Terms of reference and confidentiality plus agree Chair if first meeting
 3. Background of incident
 4. Matters arising
 - List matters arising if any
 - Actions from previous meeting (if there was one)
 5. Review of evidence
 - Microbiological
 - Environmental
 - Analytical/epidemiology
 6. Current risk assessment
 7. Control measures
 8. Further investigations
 9. Communication and media
-



Microsoft Word
Document

- External – public/media/GPs etc
- Internal
- Others
- Briefings and cascades

10. Agreed actions

11. Any other business

12. Date, time and venue for next meeting

Appendix E

Terms of Reference for the OCT²¹

- to confirm the existence of an outbreak;
- to establish case definitions;
- to identify the population at risk and to institute information gathering measures;
- to establish the extent of the outbreak through active case finding;
- to agree and assign individual responsibilities to the members of the OCT
- to consider the need for outside help and expertise;
- to coordinate all arrangements for the investigation of the source and cause of the outbreak;
- to decide on and coordinate measures to control the outbreak and protect the other members of the community;
- to implement control measures to minimise transmission from an ongoing source. (This could require closure of premises and possible legal action);
- to consider any legal proceedings that might ensue from the outbreak;
- to coordinate the control measures to be employed;
- to monitor the implementation and effectiveness of measures taken;
- to ensure that all necessary steps are being taken for the continuing clinical care of patients during the outbreak;
- to ensure, if the outbreak is likely to lead to a significant increase in hospital admissions, that hospital managers are made aware of the need to assess requirements for additional supplies and staff;
- to establish effective and consistent communications – internally, between organisations and with the public; and externally to include the press. Appoint an appropriate media spokesperson.
- to provide clear instructions and/or information for staff;
- to provide information for general practitioners, members of the public, PCO members, and elected members of the local council;
- to ensure communication with the NHS Regional Epidemiologist, HPS Colindale, Department of Health, Government Office and others where appropriate *e.g.* FSA, DEFRA;
- to meet as frequently as necessary in the circumstances of the particular outbreak and maintain an agreed detailed written record of all meetings;
- to define the end of the outbreak and to state the lessons learned;



- to prepare for the consideration of the relevant local and health authorities, a preliminary report, ideally within 48 hours of the outbreak being declared over, interim reports if necessary and a final report.

It is essential that the terms of reference are agreed upon at the first meeting.

Suggested terms of reference:

- To review the epidemiological, microbiological and environmental evidence and verify whether an outbreak is occurring
- To regularly conduct a full risk assessment whilst the outbreak is ongoing
- To develop a strategy to deal with the outbreak and allocate responsibilities to members of the OCT based on the risk assessment
- To agree appropriate further investigation
- To ensure that appropriate control measures are implemented to prevent primary and secondary cases
- To communicate as required with other LAs, HPU, professionals, the media and the public providing an accurate, timely and informative source of information
- To develop systems and procedures to prevent a future occurrence of similar incidents
- To produce a report or reports at least one of which will be the final report placed within the public domain

Appendix F

Health Protection Agency - Incident Levels

Table 1. Incident Levels

(reference Incident & Emergency Response Plan, HPA, 2010)

IERP level	Assessed foreseeable risk	Example
1	Public health impact including public/media interest or concern is limited to the local population and the response can be managed by one Health Protection Unit (HPU).	<ul style="list-style-type: none"> - Small outbreak of Norovirus in a local nursing home - <i>Salmonella</i> in a local restaurant
2	Public health impact including public/media/political interest or concern is limited to the local population but is greater than can be managed by one HPU. It may require regional HPA support and coordination.	<ul style="list-style-type: none"> - Large Norovirus outbreak which threatens the continued operation of healthcare facilities such as a hospital; - <i>Salmonella</i> in a food processing plant, or at a large function - Two or more linked cases of invasive meningococcal disease at a university - Two or more potentially linked cases of <i>Legionella</i> in a hospital setting; - <i>EColi 0157</i> in a nursery school or restaurant
3	Public health impact including public/media/political interest or concern is significant across regional boundaries or nationally. It may require supra regional or central HPA coordination and support, and interaction with central government.	<ul style="list-style-type: none"> - Confirmed serious and potentially transmissible infection (e.g. TB, Hepatitis B/C or HIV) in a healthcare worker at regional organ transplant unit; - An outbreak of a potentially fatal zoonoses such as Q fever or, psittacosis; - A suspected case of rabies or viral haemorrhagic fever;
4	Public health impact including public/media/political interest or concern upon the national population is severe. It will require central direction of the HPA response and significant interaction with central government.	<ul style="list-style-type: none"> - A suspected case or cases of a communicable disease such as anthrax or smallpox, indicative of a deliberate release;
5	Public health impact including public/media/political interest or concern upon the national population is catastrophic. Central direction of the HPA response will be required involving extensive agency resources and significant interaction with central government.	<ul style="list-style-type: none"> - Large outbreak of viral haemorrhagic fever

Annex 1

HUMAN INFECTIOUS DISEASES COMMUNICATION STRATEGY

Communication Strategy in support of the London Human Infectious Diseases Response Framework

Background

This communication strategy has been formulated to support the *London Human Infectious Diseases Response Framework*. It aims to support and contribute to the work of the London Resilience Partnership in dealing with the consequences of such an event.

Communication activity outlined in this strategy must not stand in isolation, but must contribute to the wider national outbreak response and/or the *London Human Infectious Diseases Response Framework*. It is also recognised that individual organisations may already have their own internal and external communication plans for engaging with stakeholders, the media and staff.

Definitions in the communications plan conform to existing definitions in the Human Infectious disease framework on an outbreak; epidemic; outbreak and an emerging infectious disease.

Monitoring

Any incident which may have the potential to develop into an outbreak will be monitored closely and discussed between the HPA Consultant in Communicable Disease Control (CCDC) and the PCT Infection Control Nurse (ICN) and/or the Director of Public Health, Environmental Health Officers (EHO) and the Consultant Microbiologist/ Virologist.

The lead clinician at the HPA will conduct a risk assessment based on reporting from the local Health Protection Units. Depending on the outcome, a decision will be made on further action required.

Once an outbreak has been declared the HPA and NHS will convene an Outbreak Control Team and will request representation from other organisations, as appropriate. The Outbreak Control Team will report to the London Outbreak Control Team, if required. The calling of an Incident Team or Outbreak Control Team (OCT) will be considered when one or more of these conditions apply:

- The disease poses an immediate Health Hazard to the local population
- There is a significant number of cases
- The disease is important, in terms of its severity or capacity to spread
- Cases have occurred in a high risk establishment e.g. schools, hotels, hospitals, nursing homes and residential homes, guest houses and food premises.

Strategic level trigger

A tripartite discussion will allow for discussion and assessment between LRT/GLA, the raising agency (HPA/NHS London) and the MPS.

The outcome of the discussion will include either the decision to convene a Regional Coordination Group (RCG) or to monitor the situation and keep the London Resilience Partnership appraised. The decision to convene an RCG meeting will be taken by the members of the initial Discussion. However, the urgency of the situation may call for an RCG meeting immediately.

The London Resilience Strategic Communications Group (LRSCG) will be activated by the HPA/NHS if the decision is made to invoke C2 protocols. The LRSCG will be informed if the decision is made to monitor the situation and keep the London Resilience Partnership appraised.

The London Resilience Strategic Communication Group will be chaired by NHS London; Vice Chair will be the Health Protection Agency.

Aim

Through effective internal and external communication to support the implementation of the *London Human Infectious Diseases Response Framework*.

Objectives

- To educate, inform and reassure the public about the work of London Resilience and its partners in preparing for an outbreak and to ensure that the public understand the potential impact and what it might mean in terms of a reduction in public services.
- To ensure that the business community is encouraged to plan for the effects of an outbreak on daily working
- To share good practice with stakeholders and opinion formers and to ensure that staff from Category 1 & 2 Responders are aware and informed about the plans and their responsibilities.
- To work with the media and stakeholders to identify future risks and communication challenges.
- To co-ordinate and manage the strategic communication response to an outbreak in the capital.
- To manage the communication response during the recovery phase following an outbreak.

Target Audience

- General Public
- Businesses/Employees
- Education Providers
- Older and Vulnerable People, including disabled people and people living alone
- Carers

- Faith Representatives
- Ports of Entry

- Category 1 & 2 Responders
- Front Line Staff
- Trade Unions & Staff Associations
- Stakeholders/Opinion Formers
- Other London Resilience Partners (non-category 1 or 2 responders)
- London MPs
- London Assembly Members
- Local London Councillors
- Media

Communication Activity and Key Messages

In support of our aim and objectives, key messages will be built around three principles **to educate, to inform and to reassure**. London Resilience and its partners will build its media and communication activity around three specific stages. These will be pre-outbreak, response and post-outbreak. The steps taken in the key response stage are as the *London Human Infectious Diseases Response Framework*. They are:

Containment

In order to slow the transmission of the disease, containment measures may be implemented by public health responders, dependent on the risk assessment of the disease. Containment measures may include:

- Isolation
- Quarantine
- Infection control measures, such as respiratory etiquette, hand hygiene or the use of personal protective equipment
- Social distancing strategies (e.g. cancellation of public gatherings, school closures)

Treatment

The targeted and effective use of antiviral medicines or other definitive pharmaceutical interventions is an important countermeasure, but the supply availability will be dependent on the specific disease. When used appropriately, medicines can be used to reduce the length of symptoms and usually their severity. The prompt use of medicines will benefit individual patients and may also produce public health benefits by decreasing the overall clinical attack rate, shortening the period that individuals are contagious and thus able to pass on the infection to others.

Should mass distribution of countermeasures be required, the National Health Service (NHS) will put in place an appropriate operational distribution strategy.

If a vaccine exists, the NHS will put in place arrangements to provide the vaccine to those individuals assessed as being at risk. If mass vaccination is required, the NHS will put in place an appropriate operational vaccination strategy. Vaccination will be delivered at the local level, in co-ordination with local partners.

If a vaccine does not exist, it is unlikely that it will be possible to develop a matching vaccine in a short time frame; therefore, other treatment options will need to be explored.

Individuals may need to be referred to hospital, dependent on the severity of the disease. The NHS has plans in place for developing surge capacity should this be required.

Pre Outbreak Media/Communication Activity

Key Messages

- London Resilience and its partners have been working for sometime to develop plans to handle an outbreak.
- There is no doubt that dealing with an outbreak will bring great challenges. We will need your help in meeting those challenges and supporting our response.
- Whilst we need to keep London running and try to sustain a 'business as usual' culture, we must be sensible in our approach and follow the advice and guidance of the NHS. If you feel unwell then stay at home and don't travel.
- All organisations and businesses must start to prepare now for the possibility of an outbreak. Additional staff absences are likely to result from taking time off to provide care for dependents, family bereavement, other psychosocial impacts, fear of infection and/or practical difficulties in getting to work. Businesses should not wait for an outbreak to strike before taking action; start planning and working with your staff today to prepare for such an event.
- It is important that there is an appreciation that during an outbreak some public services may be affected. We may have to prioritise essential services, although we will try to keep disruption to a minimum.
- Schools and colleges might be closed in the event of an outbreak to stop the spread of infection. Families should start to plan now for this possibility and how they would cope with child care issues if this situation were to arise.
- We would also encourage communities to support each other and to watch out for older and vulnerable people, including disabled people. If you have an older or vulnerable neighbour keep an eye out for them and make sure that they are safe and well.

These *key messages* are not exhaustive and will be reviewed and updated as national policy develops.

Communication Tools

London Resilience and its partners (at an appropriate time) should seek to put information about its handling of an outbreak into the public domain in order to educate and inform the public. This must not be done in isolation, but should be done in consultation with other stakeholders, especially NHS London. We will ensure that a variety of communication methods are used to ensure that messages are accessible to all audiences, including disabled, vulnerable people and hard to reach groups. We will look to use the following communication tools:

- Local and pan London broadcast media;
- Borough newspapers;
- Local and pan London newspapers;
- Minority media;
- Websites (London Prepared with hyperlinks to other agencies);

- Information distributed through schools/colleges;
- Information through business to employers;
- Third party communicators e.g. home helps/meals on wheels etc;
- Local authority information produced through libraries;
- Workshops with communicators from local authorities, PCTs and hospitals;
- Sharing of press lines with Category 1 & 2 Responders.

Spokespeople

Health professionals will be the primary spokespersons for London's response to an outbreak and this will be decided by NHS London/HPA. We will consider completing this by putting up spokespeople to talk about the wider London Resilience response or specific non- health related issues e.g. the potential impact on transport. Spokespeople we may consider are:

- Mayor of London
- Chief Executive London Councils
- Transport for London Spokesperson
- Representative from the business community

Facilities

Where possible we should look for media opportunities to highlight our planning and preparatory work for the handling an outbreak e.g. exercises. This would also help us to put some context around specific issues.

During an outbreak Media/Communication Activity

In the event of an outbreak, the NHS will be running national and pan London advertising campaigns on television and radio. Leaflets will also be produced and distributed to every household in the UK. These will be largely *medical focussed* but will also give some more general practical advice and information.

London Resilience should look to build on this public information by informing Londoners about specific events and issues that could or will impact on London. Some of the issues we could highlight are shown below.

There will a two step response to an outbreak as outlined in the *London Human Infectious Diseases Response Framework* that of containment measures and treatment. The key messages will reflect that.

Containment

Key Messages

- The next few weeks will bring great challenges as we handle an outbreak. We will need the public's help in meeting those challenges and supporting our response. You can help yourself by:
 - Remembering to wash your hands frequently with soap and warm water to reduce the spread of the virus from the hands to the face, or to other people, particularly after blowing the nose or disposing of tissues.
 - Remember to clean frequently touched hard surfaces (e.g. kitchen worktops, door handles) regularly using normal cleaning products
- Although we need to keep London running and try to sustain a 'business as usual' culture, we must be sensible in our approach and follow the advice and guidance of the NHS. If you feel unwell then stay at home and don't travel. By playing your part, we can get London back to normal quicker.
- Businesses should start to consider how they would implement their business continuity arrangements and how they will keep their staff informed about what is going on.
- Some public services might be affected, as we have to prioritise essential services. We will try to keep any disruption to a minimum.
- Trains and buses may also face restrictions or a reduced service. We are working with transport operators to try to ensure that any disruption is kept to a minimum.
- As a precaution schools and colleges might be closed. We will try to keep disruption to a minimum and ensure that parents and carers are kept informed. Schools and local authorities will be working together to try to return things to normal as quickly as possible.
- We would also encourage communities to support each other and to watch out for older and vulnerable people, including disabled people. If you have an older or vulnerable neighbour keep an eye out for them and make sure that they are safe and well

- Maintain small stocks of non-perishable foodstuffs to minimise contact with others if you become unwell.

Treatment

Key Messages

- Although we need to keep London running and try to sustain a 'business as usual' culture, we must be sensible in our approach and follow the advice and guidance of the NHS. If you feel unwell then stay at home and don't travel. By playing your part, we can get London back to normal quicker.
- Some public services might be affected, as we have to prioritise essential services. We will try to keep any disruption to a minimum. Trains and buses may also face restrictions or a reduced service. We are working with transport operators to try to ensure that any disruption is kept to a minimum.
- As a precaution schools and colleges might be closed. We will try to keep disruption to a minimum and ensure that parents and carers are kept informed. Schools and local authorities will be working together to try to return things to normal as quickly as possible.
- We would also encourage communities to support each other and to watch out for older and vulnerable people, including disabled people. If you have an older or vulnerable neighbour keep an eye out for them and make sure that they are safe and well
- If you have a (outbreak) illness you can check your symptoms and get access to treatment online. However, it is important that you contact your GP by telephone if your symptoms persist or get worse.

These *key messages* are not exhaustive and will depend upon the nature of the outbreak. Key messages will also be reviewed and updated as the situation develops at a national and London level.

Communication Tools

- Local and pan London broadcast media;
- Borough newspapers;
- Local and pan London newspapers;
- Minority media;
- Websites (London Prepared with hyperlinks to other agencies);
- Information distributed through schools/colleges;
- Third party communicators e.g. home helps/meals on wheels etc;
- Internal communications channels for healthcare and support workers.
- Local authority information produced through libraries;

- Information on dot matrix boards on the transport system;
- SMS messages to mobile telephones;
- Digital advertising media in public places such as shopping centres;
- Sharing of press lines with Category 1 & 2 Responders.

Spokespeople

Health professionals will be the primary spokespersons for London's response to an outbreak. We will consider completing this by putting up spokespeople to talk about the wider London Resilience response or specific non- health related issues e.g. the potential impact on transport. Spokespeople we may consider are:

- Mayor of London
- Chief Executive London Councils
- Police spokesperson
- London Ambulance Service spokesperson
- Transport for London Spokesperson
- Representative from the business community

Facilities

There is no doubt that there will be a demand for pictures/facilities that show the consequences of an outbreak. Whilst it will be for NHS London to take the lead, there may be some merit in organising facilities to demonstrate what London Resilience and its partners are doing. Appropriate media opportunities will be identified and co-ordinated (where appropriate) through the Media Cell.

Post Outbreak Media/Communication Activity

There will be considerable focus on dealing with fatalities and the bereaved and to return London back to normality. One issue that will need to be addressed at this point is the need for a possible memorial in London.

Key Messages

- Thank the public for their co-operation and support.
- Regret that there have been a number of deaths and we must now look to support the family and friends of the bereaved. *We will also be reflecting on how London marks those who have died as result of this terrible virus.*
- We must also look to support businesses in returning to a degree of normality.
- Some of our public services might still be affected, but we will try to keep any disruption to a minimum.
- We will be closely monitoring the situation in the next few weeks and will continue to work with our health partners and other stakeholders to identify and deal with any major issues or any further outbreak.
- Over the last few weeks many people have been checking on their older and vulnerable neighbours. We would ask that this practice continues.
- Excess deaths – line awaits depending on national guidance

These *key messages* are not exhaustive and will be reviewed and updated on an on-going basis depending on developments.

Communication Tools

- Local and pan London broadcast media;
- Borough newsletters
- Local and pan London newspapers;
- Minority media;
- Websites (London Prepared with hyperlinks to other agencies);
- Information distributed through schools/colleges;
- Third party communicators e.g. home helps/meals on wheels etc;
- Sharing of press lines with Category 1 & 2 Responders.

Spokespeople

- Mayor of London

- *Others to deal with specific events/incidents e.g. TFL re Transport*

Facilities

We should seek to identify suitable media facilities that demonstrate London running as normal and business as usual activity.

Managing Co-ordination

London Resilience already has an effective communications network for managing major incidents in the capital. We will build on our existing structures to manage and support the communication response to an outbreak. (See Appendix A).

The London Resilience Strategic Communication Group has agreed to set up a Media Cell to support the work of the Regional Coordination Group (RCG). This will be chaired by NHS London; Vice Chair will be the Health Protection Agency.

The Media Cell will be made up of representatives from the police (Met, BTP or City of London), London Ambulance Service, London Fire Brigade, NHS London, London Councils, Transport for London (representing all surface transport operators), Greater London Authority, Health Protection Agency, Government News Co-ordination Centre (NCC) and London Resilience Team. Others can be co-opted on to this group as necessary.

The Media Cell will meet in person or remotely via conference call and will deal with the strategic communication issues impacting on the response in London to an outbreak.

In addition *lines to take* will be shared between all agencies. If the Government's News Co-ordination Centre (NCC) is operational then a representative from the Media Cell will be appointed as the *London link* to work at the NCC to co-ordinate press lines and facility requests.

Each organisation will be responsible for handling any press enquiries in relation to its own business area.

Review/Evaluation/Testing

In formulating this communication strategy we have liaised with our partners and stakeholders, including the media. We will review this strategy on an ongoing basis through the London Resilience Strategic Communication Group and the London Media Emergency Forum.

We will seek to share information about this strategy through workshops and will test it in exercise with our partner agencies and stakeholders.

We will take into consideration any changes to national policy that could impact on this strategy and our response.

Budget/Resources

No additional money has been identified to contribute to the media and communication response. London Resilience will look to use its existing communication structures to

manage an outbreak. Although this does not take into account the need for any advertising or marketing material that may be required.

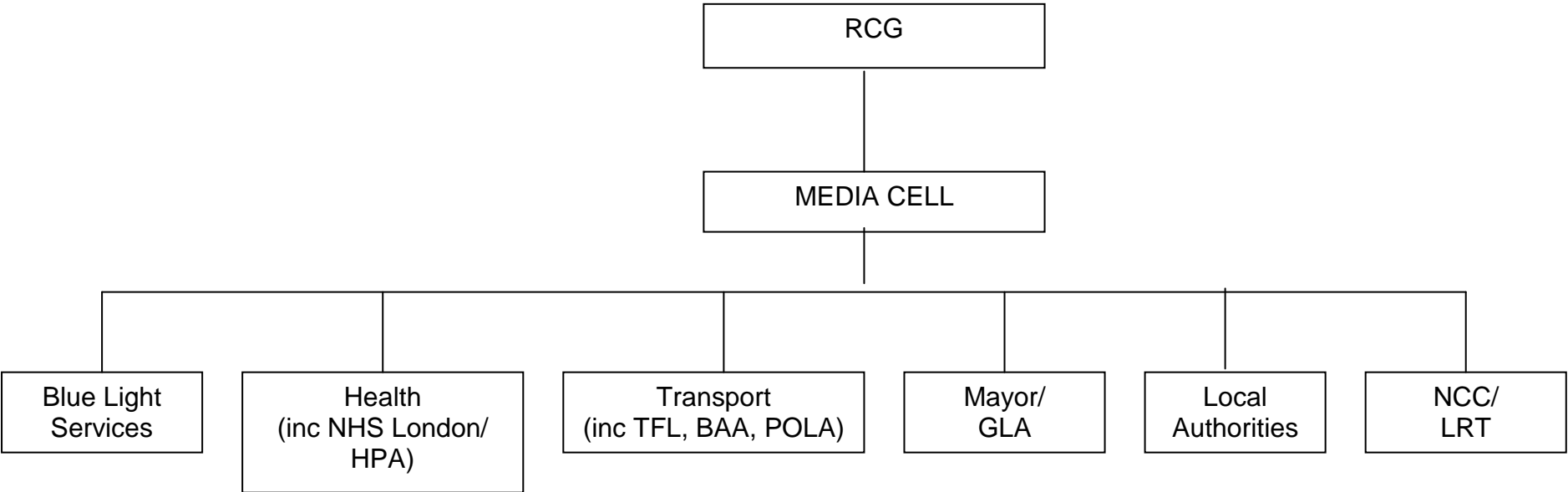
Timescales

The implementation of the pre-education part of this strategy is very much dependent on the work being undertaken at a national level in key business areas. An outline plan of possible activity to be delivered over the next 12 months is shown at Appendix B, although this could be subject to change.

Ed Stearns
Chair
London Resilience Strategic Communication Group
September 2010
Updated Sept 2010 to reflect structural changes

APPENDIX A

London Resilience Communication Structure



APPENDIX B

HUMAN INFECTIOUS DISEASE COMMUNICATION PLAN 2010

	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
HID Activity												
Planned Media/PR Activity												
Workshops/ Networking Events												
Exercise/ Training												
Website Update												
LMEF												
LRSCG Meeting (Review plans)												