

Health Protection Agency

Pandemic Influenza Contingency Plan

Planning Checklist:
Centre for Infections



HPA actions during an Influenza Pandemic by WHO Phase and UK Alert Level

Pandemic Influenza Planning Checklist

This edited version of the HPA Pandemic Influenza Contingency Plan has been produced to be used as a performance management tool by the Centre for Infections (Cfl).

It includes only those actions which are the responsibility of Cfl.

Similar documents are being produced for the other Divisions and Centres across the Agency with responsibilities during the WHO Pandemic Phases and UK Alert Levels.

You should use this document as a tool to ensure you are able to respond at each of the WHO Phases and UK Alert Levels.

The full plan, including background information and details of the WHO Phases and UK Alert Levels, is available on the HPA website at:

http://www.hpa.org.uk/infections/topics_az/influenza/pandemic/fluplan.htm

Roles and responsibilities of the Centre for Infections

The Centre for Infections (Cfl), Colindale will provide specialist advice; coordinate the provision of clinical and epidemiological surveillance data; provide infection control advice; undertake epidemiological analyses; disseminate relevant information to the public and healthcare professionals; undertake modelling studies. Specific advice will be offered to DH regarding strategy and policy for use of antivirals and vaccine. The Cfl will also obtain and characterise the new virus; conduct virological surveillance; provide advice on biological safety; develop and validate new diagnostic tests; rollout new tests as appropriate; provide antiviral susceptibility testing. In discharging its responsibilities, Cfl will be able to draw on the expertise, resources and containment facilities available at CEPR, including the Special Pathogens Reference Unit.

How to use this as a Performance Management Tool

Complete the third column under each phase with red, amber or green to indicate your level of preparedness:

Red = Action not started
Amber = Action in progress or partially completed
Green = Action completed

Review your pandemic preparedness regularly as planning progresses.

Please contact your local Health Emergency Planning Adviser if you have any queries about implementing the Plan, or the HPA Pandemic Influenza Office (pandemic.flu@hpa.org.uk) with scientific queries.

1. Actions* during the WHO Phases 1 & 2

WHO PHASES 1 & 2: INTERPANDEMIC PERIOD		
Definition		
Phase 1		
No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection or disease is considered to be low.		
Phase 2		
No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.		

Action	Implementer	Red/Amber/Green
Maintain and develop routine national surveillance and reporting systems for influenza	Head of Respiratory Diseases Department / Head of Influenza Surveillance Section	
Contribute to WHO and EU influenza surveillance activities	Head of Respiratory Diseases Department / Head of Influenza Laboratory / Head of Influenza Surveillance Section	
Assess threat to UK posed by influenza activity abroad	Head of Respiratory Diseases Department / Head of Influenza Laboratory/ Head of Pandemic Influenza Office	
Maintain and develop reference virology services for influenza	Head of Influenza Reference Laboratory	
Undertake modelling studies to support pandemic influenza contingency planning and pandemic exercise planning. Including modelling to assess possible therapeutic, public health and social interventions.	Head of Modelling	

3¹. Actions during the WHO Phase 3: Pandemic Alert Period

WHO PHASE 3: PANDEMIC ALERT PERIOD		
Definition		
Human infection(s) with a new subtype, but no new human-to-human spread, or at most rare instances of spread to a close contact		
Action	Implementer	Red/Amber/Green
In collaboration with LaRS, influenza surveillance teams in Wales, Scotland, N. Ireland, RCGP, NHS Direct and QResearch, develop and maintain systems	Head of Influenza Surveillance Section	

* The actions listed in each phase assume that the actions in the previous phase have been implemented. Where a phase or phases are passed over eg a move from Phase 4 direct to Phase 6, the actions in the intermediary phases should also be implemented.

¹ The section numbering moves directly to 3 in order to match WHO Phases

and templates for daily reporting of UK surveillance data and rehearse output		
Ensure that laboratory diagnostics are fit for purpose in reference laboratory. Develop new diagnostics as required	Head of Influenza Laboratory	
With Head of Regional Microbiology Network roll out validated diagnostic tests for novel influenza subtype. Ensure competence of laboratories by quality control evaluation	Head of Influenza Laboratory	
Develop and maintain antiviral susceptibility testing of potential pandemic viruses	Head of Influenza Laboratory	
Liaise with NIBSC, CEPR and DH over vaccine development plans	Head of Influenza Laboratory	
Develop a robust framework and protocols for the management of repeat population-based serological surveys to determine the prevalence of antibody to the novel influenza subtype at different stages in the pandemic	Head of Influenza Laboratory / Head of Immunisation Department	
Work with LaRS to develop a system for the collection, analysis, interpretation, and dissemination of data on co-pathogens (bacteria) associated with novel influenza infection	Director of Respiratory and Systemic Infections Laboratory / LaRS IT Lead / Regional Epidemiologists	
Monitor and disseminate international reports on avian influenza and human cases	Head of Pandemic Influenza Office	
Prepare and disseminate algorithms for the management of returning travellers, contacts and persons involved in avian influenza incidents in wild birds or poultry for phase 3 and in preparation for phases 4 & 5	Head of Pandemic Influenza Office	
Work with DH to provide other guidance documents for avian and pandemic influenza as agreed	Head of Pandemic Influenza Office	
In collaboration with LaRS establish and maintain an avian influenza database	Head of Pandemic Influenza Office	
In collaboration with LaRS produce and disseminate regular updates and briefings to HPU on international and domestic simulations and operational preparedness across the HPA	Pandemic Influenza Scientific Coordinator	
Work with DH to lead HPA modelling for avian and pandemic influenza and ensure findings are disseminated across the HPA as appropriate to national policy	Head of Modelling	
Maintain and rehearse opening of emergency operations centre	Site Manager and Site Head of IT	

4. Actions during the WHO Phase 4: Pandemic Alert Period

WHO PHASE 4: PANDEMIC ALERT PERIOD

Definition

Small cluster(s) with limited human-to-human transmission but spread is highly localised, suggesting that the virus is not well adapted to humans

Action	Implementer	Red/Amber/Green
Develop antiviral susceptibility testing for novel subtype	Head of Influenza Laboratory	
Develop and validate serological tests for the novel subtype	Head of Influenza Laboratory	
Develop guidelines for use of rapid tests	Head of Influenza Laboratory	
On receipt of novel virus from WHO continue evaluation and development of diagnostics	Head of Influenza Laboratory	
Evaluate commercial and non-commercial rapid tests for sensitivity and specificity against the virus	Head of Influenza Laboratory with Regional Microbiology Network	
Ensure antimicrobial susceptibility data on bacterial pneumonia pathogens is being received from LaRS and analysed	Respiratory and Systemic Infections Laboratory / LaRS IT Lead	
Convene a meeting of the HPA Rapid Assessment Group to review the current situation and advise the CEO and Head of IRVPB	Head of Pandemic Influenza Office	
Update surveillance definition, guidelines and case management algorithms	Head of Pandemic Influenza Office	
Develop models of pandemic influenza for contingency and intervention planning	Head of Modelling and Economics Unit	

5. Actions during the WHO Phase 5: Pandemic Alert Period

WHO PHASE 5: PANDEMIC ALERT PERIOD

Definition

Large cluster(s) but human-to-human spread still localised, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk)

Action	Implementer	Red/Amber/Green
With NHS Direct and LaRS ensure that protocols are in place for structured enhanced surveillance using agreed algorithms	Head of Influenza Surveillance Section / Head of Primary Care Surveillance Unit	
With Defra/Health and Safety Executive (HSE)/Advisory Committee for Dangerous Pathogens (ACDP) and clinical virology network review and establish guidelines for handling virus in phases 5 and 6	Head of Influenza Laboratory	
Begin production of diagnostic reagents for new strain	Head of Influenza Laboratory	
Distribute diagnostic reagents to regional	Head of Influenza	

laboratory network	Laboratory	
Develop robust serological tests for assessment and susceptibility and immunity to new virus	Head of Influenza Laboratory	
Perform pre-pandemic serological survey	Head of Influenza Laboratory / Head of Immunisation Department	
Ensure antimicrobial susceptibility data on bacterial pneumonia pathogens is being analysed and reported	Respiratory and Systemic Infections Laboratory	
Review and update national guidance on infection control measures	Head of Pandemic Influenza Office	
Ensure the appropriateness of the advice on the HPA internet in the light of the emerging epidemiology and virology	Pandemic Influenza Scientific Coordinator	
Rehearse daily reporting DH Major Incident Coordination Centre for collation and onward reporting Cabinet Office Civil Contingencies Committee	Head of Influenza Section	
Update models of pandemic influenza with new parameter values if available	Head of Modelling & Economics Unit	
Open Cfls Emergency Operations Centre	Site Manager	

6.1². Actions during the WHO Phase 6: Pandemic Period, UK Alert Level 1

PHASE 6: PANDEMIC PERIOD, UK ALERT LEVEL 1

Definition

Pandemic phase: increased and sustained transmission in the general population

Alert Level 1

Virus/cases only outside the UK

Action	Implementer	Red/Amber/Green
Begin UK wide surveillance and daily reporting 'battle rhythm' as specified by Civil Contingencies Secretariat (CCS) Daily Situation Cell Report	Head of Influenza Section / Head of Pandemic Influenza Office	
Rapidly disseminate information about emerging clinical and virological surveillance data.	Head of Pandemic Influenza Office	
Test representative sample of all influenza specimens for new virus.	Head of Influenza Laboratory	
If requested to do so: support DH in setting guidelines for the use of antiviral and vaccines	Head of Modelling, Head of Respiratory Disease Department / Head of Pandemic Influenza Office / Immunisation Department	
Develop enhanced surveillance in special groups if required	Head of Influenza Section, Head of Influenza Laboratory with Head of	

² In WHO Phase 6, the second digit of the section numbering denotes the UK Alert Level

	Regional Microbiology Network	
Update models of pandemic influenza with new parameter values if available	Head of Modelling & Economics Unit	

6.2 Actions during the WHO Phase 6: Pandemic Period, UK Alert Level 2

PHASE 6: PANDEMIC PERIOD, UK ALERT LEVEL 2

Definition

Pandemic phase: increased and sustained transmission in the general population

Alert Level 2

Virus isolated in the UK

Action	Implementer	Red/Amber/Green
Invoke major incident plan for site and consider staff redeployment	Director of Cfl	
Review information on co-pathogens in influenza cases (community and hospital) and report	Director of Respiratory and Systemic Infections Laboratory	
Produce detailed antigenic and genetic characterisation for all novel UK influenza viruses for preparation of candidate vaccine strains	Head of Influenza Laboratory	
Develop UK specific serological and diagnostic reagents	Head of Influenza Laboratory	
Compare virological data from UK and international sources.	Head of Influenza Laboratory	
Monitor antiviral susceptibility of virus isolates, including any treatment failures and compare data with other international sources	Head of Influenza Laboratory	
Analyse FF100 database to estimate key parameters	Head of Modelling and Economics Unit	

6.3. Actions during the WHO Phase 6: Pandemic Period, UK Alert Levels 3 & 4

PHASE 6: PANDEMIC PERIOD, UK ALERT LEVEL 3 and 4

Definition

Pandemic phase: increased and sustained transmission in the general population

Alert Level 3

Outbreak(s) in the UK

Alert Level 4

Widespread pandemic activity in the UK

Action	Implementer	Red/Amber/Green
Review information on co-pathogens in influenza cases (community and hospital)	Head of Pandemic Influenza Office/ Director Respiratory Systems Infection Laboratory	
In collaboration with LaRS consider	Head of Pandemic Influenza	

closure of national avian influenza database and substitution of aggregate reporting	Office	
Monitor systematically collected and anecdotal reports of influenza activity across the country and in the population	Head of Influenza Surveillance Section	
Continue to collate and interpret information from established surveillance systems and ad hoc sources to provide daily Situation Cell Report to support the work of other agencies and the Civil Contingencies Committee (as convened)	Head of Influenza Surveillance Section	
In collaboration with LaRS investigate and document outbreaks including efficacy of any appropriate control measures and clinical and microbiological results	Head of Pandemic Influenza Office / Head of Modelling	
Produce detailed antigenic and genetic characterisation for all UK influenza novel viruses for preparation of candidate vaccine strains	Head of Influenza Laboratory	
Develop UK specific serological and diagnostic reagents	Head of Influenza Laboratory	
Compare virological data from UK and international sources	Head of Influenza Laboratory	
Monitor antiviral susceptibility of virus isolates, including treatment failures and compare data with other international sources	Head of Influenza Laboratory	
Reduce virological surveillance when pandemic reaches peak to avoid overwhelming laboratories	Head of Influenza Laboratory	
Monitor antigenic drift in novel strain, antiviral resistance or emergence of other variants	Head of Influenza Laboratory	
Continue surveillance of secondary bacterial infections to inform treatment guidelines	Head of Respiratory Systems and Infection Laboratory	
Produce estimates of epidemic progress and forecasts by fitting real-time models to available surveillance data	Head of Modelling and Economics Unit	

6.4 Actions during the WHO Phase 6: End of the First Pandemic Wave

PHASE 6: END OF FIRST PANDEMIC WAVE

Definition

End of first pandemic wave; return to inter-pandemic period

Action	Implementer	Red/Amber/Green
Carry out internal debrief to contribute to the overall HPA debrief report	Director of Cfl	
Perform post-wave serological survey	Head of Influenza Laboratory / Head of Immunisation Department	
Monitor uptake of vaccine as supply meets demand and mass vaccination gets underway	Head of Influenza Section	
Carry out a national serological survey to determine age specific patterns of residual susceptibility and age-specific attack rates	Head of Influenza Laboratory and Head of Modelling	
In collaboration with Head of International Office evaluate national experience in comparison with other countries through international liaison	Head of Pandemic Influenza Office	
Consider how to foster international research collaborations on pandemic influenza	Respiratory R&D Lead / LaRS R&D Lead	

6.5 Actions during the WHO Phase 6: Second or Subsequent Waves

PHASE 6: SECOND OR SUBSEQUENT WAVES

Definition

Based on past experience, a second wave of outbreaks caused by the new virus may be expected to occur in many countries

Action	Implementer	Red/Amber/Green
Maintain national surveillance mechanisms for evidence of resurgence in activity	Head of Influenza Section	
Continue monitoring global impact and spread of virus	Head of Pandemic Influenza Office	
Review actions taken and adapt existing plans in the light of lessons learned	Head of Pandemic Influenza Office	
Monitor any antigenic drift in the virus and assess potential significance	Head of Influenza Laboratory	
Forecast epidemic by fitting real-time models to available surveillance data	Head of Modelling and Economics Unit	

7. Actions during the Post-Pandemic Period

POST-PANDEMIC PERIOD

Definition

WHO will announce when the pandemic period is over. In the UK the pandemic will be deemed to have ceased when the epidemiological indices have returned to background levels

Key planning assumptions

- This or a similar virus is likely to remain in circulation
- It may take months or even several years for some national services to recover

Action	Implementer	Red/Amber/Green
Evaluate the impact of the pandemic. Identify lessons learned and disseminate new scientific learning through appropriate channels	Director of Cfl	