

'THE POSSIBILITY OF A WORLDWIDE INFLUENZA PANDEMIC PRESENTS A REAL AND DAUNTING CHALLENGE TO THE ECONOMIC AND SOCIAL WELLBEING OF ANY COUNTRY, AS WELL AS A SERIOUS RISK TO THE HEALTH OF ITS POPULATION'

UK National Framework for Responding to an Influenza Pandemic - 2007

THE BACKGROUND SITUATION

CONTEXTUAL ENVIRONMENT

The Contextual environment is that which lies outside the control or influence of the organisation.

- The last pandemic was in 1968/69. Intervals between pandemics has historically varied between 10 and 40 years.

“The pandemic clock is ticking – we just don’t know what time it is”

Edgar Marcuse – University of Washington, School of Medicine

- Key lessons from past pandemics include: unpredictability; not always in winter as seasonal variation is less distinct in the tropics; rapid surge in number of cases over brief period of time
- The pandemic may start anywhere in the world **including UK**
- The virus may be a re-emerging, previously known human subtype that has not recently been in circulation, or a new virus – most likely of avian origin – emerging either through stepwise adaptation conferring greater affinity for people or through a process of genetic re-assortment between the genes of an avian and a human virus. A new virus sub-type of concern is H5N1. H3N2 (Australian Flu) is circulating and may be a re-emerging virus. This strain may take over as the dominant seasonal flu strain or could possibly trigger a pandemic as the populace has little resistance to this strain. The seasonal flu virus will be circulating at the onset of a pandemic.
- More than one wave of influenza is likely; the gaps between the waves may be weeks or months; a subsequent wave may be more or less severe than the first
- The pandemic wave(s) will peak in other parts of the world before (and after) the UK; adversely impacting UK businesses

- Accelerated transmission may occur in the workplace, resulting in staff being ill during a narrower time frame than in the general population.
- It is estimated (*UK Department of Health*) that 25% of the UK workforce will take 7-10 working days off sick, over one or more waves, each of around 15 weeks duration: with a case fatality rate of 0.37%. The reasonable 'worst case' scenario (*UK Cabinet Office*) estimates a 50% sickness rate, over one or more waves: with a case fatality rate of 2.5%.
- In previous pandemics, the overall UK clinical attack rate has been in the order of 25% to 35%, compared with the usual seasonal range of 5% to 15% (*UK Department of Health*)
- Modelling suggests (*UK Department of Health*) that during the peak of infection, average absenteeism will rise to 5-7% in the UK assuming an attack rate of 25%. This equates to about three times the normal average absenteeism in a private sector company and doubles that in the public sector. In a 50% attack rate these figures rise to 10-15%.
- Planning Guidance (*UK Cabinet Office/Dept of Health*) is that organisations employing a large number of people should plan on staff absence rates of between 15% and 20% over a 2-3 week peak period (in addition to usual absenteeism levels) and that in small businesses, or in small critical teams, that peak absenteeism could be 30% - 35%. Higher rates may be expected in businesses with a handful of employees. To take into account possible parent-worker absences in the event of school closures, consider and plan for the impact of possible school closures, taking into account the make-up of the workforce (e.g., the proportion of staff with children under 16). (Absenteeism will include the sick, those caring for the sick, those caring for children who may have been sent home from school, those who are working from home, those who cannot get to work, the 'worried well', those on holiday etc.)
- Antiviral drugs will be prescription drugs in UK and not generally available but will be predominantly used for treatment of the ill; healthcare workers will be prioritised for initial supplies; there may be some limited use of antivirals as prophylaxis as an initial containment measure
- An effective vaccine will not be generally available until > 4-6 months after isolation of the particular sub-type of influenza causing the pandemic (*manufacturing limitations*).
- Countries (other than isolated island communities) should not close their borders (*WHO*).
- In all affected countries there will be an impact on all services including Health Service; police; fire; the military; fuel supply; energy; telecommunications; food production / supply / distribution; transport; education and commerce
- In the UK mandatory quarantine and curfews are not currently covered by public health legislation. Powers resting with local authorities allow power to seek orders from a Justice of the Peace to requiring a person to be medically examined and to be removed to and detained in

hospital. Local authorities may also request a person not to work with a view to preventing the spread of infection; require a child who has been exposed to infection not to attend school and place restrictions on children's places of entertainment.

- In the UK the Government may take emergency powers under the Civil Contingencies Act 2004. (Powers taken could include stopping or enforcing the movement of people; stopping assemblies of people; restricting travel; protecting the supply health services, food, water, energy, fuel, money, communications, transport and enabling the deployment of HM Forces.)
- The world recession will be exacerbated with all economies slowing down adversely affecting markets
- Media reporting will probably be sensational

TRANSACTIONAL ENVIRONMENT

The transactional environment is that which lies within the ability of the organisation to influence but not control - a contractual relationship normally exists.

“A severe pandemic, CBO [Congressional Budget Office] says, would lead to an 80% drop in economic activity for the entertainment, arts and dining sectors, the disappearance of a quarter of all retail sales and a severe curtailment of travel. Agriculture and manufacturing would take heavy hits as well. Pandemics dry up world trade.”

Bill Frist, majority leader of the U.S. Senate

- Manufacturing may be impacted due lack of raw materials availability and curtailment of imports and exports due to border closures. Companies dependent on outsourcing and parts made overseas will be forced to curtail operations.
- All supply chains will be vulnerable possibly resulting in an inability to produce or provide service; there may be fewer or more customers
- There may be variations on demand for own services related to the peaks and troughs of the pandemic cycle and the type of business
- There will be cash flow implications – own; on suppliers; on customers
- Off-shoring and outsourcing may be major issues
- Insurance may not cover potential business impacts
- Increased health care costs and the impact on private health care schemes

- Potential for changes in customer/client relationships during the outbreak
- Project cost over-runs
- Force-majeure in contracts of suppliers may exacerbate shortages: in own delivery contracts may be an advantage
- The economic impacts will be longer lasting than the pandemic. Altered behaviour patterns may radically change the markets in some business sectors.

OPERATIONAL ENVIRONMENT

The operational environment is that which lies within the control and influence of the organisation.

- The most valuable asset to a business is a person who has had influenza and recovered
- Reactions of staff and the impact of rumours and misinformation - fear factor; loyalty; absenteeism; worried well
- Introduction of the HR policies to mitigate the effects of the pandemic may constitute a change in conditions of employment
- Ability to conduct critical activities through the pandemic cycle - when will demand for own services be high and low in relation to the peaks and troughs
- Ability to conduct critical activities - at all; restricted; unhindered - through a pandemic wave
- Impact of reduction in reliability of key infrastructure – Emergency Services; health service; utilities; local government services (waste disposal) etc
- Resilience of the business - ability to transfer work to unaffected areas
- IT will be under intense pressure as staff work from home and an increased demand for virtual meetings
- De-escalation from WHO Phase 6 is as important to manage as the escalation



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Prepared by Jamie Jameson

Tel: +44 (0)1332 222299
 Email: info@linkassociates.com
www.linkassociates.com

COMPANY CONSIDERATIONS AT EACH WORLD HEALTH ORGANISATION PANDEMIC PHASE

| Phase | World Health Organisation Description | Company Actions |
|--|--|---|
| INTER-PANDEMIC PERIOD | | |
| 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. | |
| 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 | |
| PANDEMIC ALERT PERIOD THE WHO ALERT PHASE IS 3 - (1 January 2009) | | |
| 3 | Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact | <p>General:</p> <ul style="list-style-type: none"> - Monitor relevant information sources for guidance including WHO and host government announcements - Executive management to understand the risk potential of pandemic flu being superimposed on the current effects of the recession - Executive management to appreciate the possibility that a pandemic will impact world trade for years rather than weeks - Identify business opportunities – pre; during and post pandemic - Develop, prepare and test Business Continuity Plans - Establish single points of knowledge failure [<i>who is the only person who knows about?</i>] with regard to knowledge of and within the organisation. Make arrangements to manage / transfer / share this knowledge. |



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Prepared by Jamie Jameson

Tel: +44 (0)1332 222299
Email: info@linkassociates.com
www.linkassociates.com

3 (Cont)

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- Establish own trigger points for the implementation of plans and procedures
- Operations:**
- Identify and establish key activities and who performs *[NOT key people]*
 - Develop contingency plans for maintaining critical business functions for several weeks at high levels of absenteeism in Phases 5 and 6 *[assume loss of up to 50% of the workforce over a period of 4 weeks at the height of each pandemic wave: assume a loss of 15% on any particular day]*
 - Employee sickness absences may create a need for other employees, if willing, to work longer hours in order to keep your business going. In UK ensure compliance with the requirements of the Working Time Regulations 1998 as amended to ensure appropriate length of daytime working hours, night shifts and rest breaks. *[HSE advice]*
 - Review the staffing requirements and the dependencies on other organisations *[energy; fuel supply; transport etc]*
 - Confirm key partners and the supply chain have all developed interlocking contingency plans
 - Ensure ability to pay suppliers in absence of own finance staff
 - Provide remote access option to key networks and applications; ensure a sudden increase in remote access can be managed
 - Consider / develop the ability for key staff to work from home or an alternate location
 - Consider the development of virtual teams who have the telephony, communications software and access to documentary software to work effectively
 - Consider the split of critical functions and staff between two locations *[authorisation; administration]*
 - Provide key members of staff with the equipment and support services that may be necessary for them to work effectively from home. *[laptop; company mobile phone; broadband; remote access to IT network; blackberries or iPhone]*
 - Develop internal communications infrastructure which will enable information to be disseminated to staff both ill, well and absent *[Twitter, SMS, email, 0800 number]*



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Prepared by Jamie Jameson

Tel: +44 (0)1332 222299
Email: info@linkassociates.com
www.linkassociates.com

3 (Cont)

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- Identify business opportunities for phases 4-6

People:

- Update employee personal and contact data including NOK and emergency contact lists
- Ensure adequate medical coverage, insurance and emergency support for business travellers
- Ensure the company's medical Insurance will be valid in countries where there is Pandemic Flu
- Invoke a mandatory briefing for staff travelling on business to areas of high risk. Make similar travel advice available to those going on holiday
- Provide information to staff via intranet, notice boards, email *[including updates on the world-wide and local situation]*
- Emphasise the importance of personal health and hygiene
- Ensure all employees are aware of both Company and medical emergency telephone contact numbers
- Source and secure access to anti-viral drug supply *[If appropriate to the business]*
- Cross train to cover a potential skills shortage in any area
- Consult with staff over potential changes in conditions of employment
- Establish prescribing criteria for antivirals

Property:

- Ensure contracts for work area recovery sites allow access during communicative disease, pandemic flu and own building quarantine scenarios
- Identify where stocks of hygiene supplies for issue to all staff can be sourced *[antiseptic hand wash dispensers; alcohol wipes; face masks]*
- Contract additional cleaning and disinfecting services at Phase 4

Legal:

- Review existing contracts both for the receipt of goods/services. Ensure resilience



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Tel: +44 (0)1332 222299
 Email: info@linkassociates.com
www.linkassociates.com

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| <p>3 (Cont)</p> | <p>Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact</p> | <p>if they allow suppliers to claim force majeure in the case of pandemic/epidemic</p> <ul style="list-style-type: none"> - Review existing contracts for the supply of goods/services. Ensure they allow you to claim force majeure in the case of pandemic/epidemic - Check if any new HR policies will constitute a change in conditions of employment - Follow government guidelines as part of 'behaving reasonably' - Consider and comply with local legislation regarding: working times; health and safety; competition law; corporate responsibility; emergency powers |
| <p>4</p> | <p>Small cluster(s) with limited human to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans</p> | <p>General:</p> <ul style="list-style-type: none"> - Continue to monitor relevant information sources for guidance including WHO and host government announcements - Monitor developments in any affected country - Test Business Continuity Plans <p>Operations:</p> <ul style="list-style-type: none"> - Consider need for early implementation of contingency plans for critical activities and key operational sites - Test remote working by ensuring that teams or parts of teams work from home on a regular basis - Train virtual teams who have the telephony, communications software and access to documentary software to work effectively - Test contingency plans with supply chain and key partners - Reduce unnecessary business travel; consider suspending business travel to affected areas/countries; increase video-conferencing / tele-conferencing and virtual team working - Review how travel is monitored including that for personal travel and improve tracking if necessary - Reduce the number of overseas visitors from areas of high risk - Require staff in affected countries showing symptoms of cold/flu to follow host country government guidelines |

| | | |
|-----------------|---|--|
| 4 (Cont) | <p>Small cluster(s) with limited human to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans</p> | <ul style="list-style-type: none"> - Introduce quarantine period for staff returning from infected countries - Issue personal hygiene kits to staff in affected countries - In consultation with company doctor assist employees in need of anti-viral medication <i>[those diagnosed with flu in affected countries; those required to travel by air etc]</i> - Consider potential transfer of work to unaffected areas - Prepare a timeline analysis of potential business impacts if phase 5 is reached - Capitalise any business opportunity <p>People:</p> <ul style="list-style-type: none"> - Emphasise the need to personal hygiene - Update information and awareness briefings for staff - Maintain frequent contact with any staff at home with symptoms of cold/flu; ensure staff provide confirmation of diagnosis; provide support as necessary - Encourage voluntary quarantine for staff with symptoms of flu <p>Property:</p> <ul style="list-style-type: none"> - In affected countries <ul style="list-style-type: none"> ▪ institute additional cleaning and disinfecting service for offices and common areas <i>[door handles, lift control panels, handrails, telephones, rubbish bins etc]</i> ▪ ensure common approach taken across all tenants in a multi-tenanted building <p>Security:</p> <p>Consider more stringent access control to offices for external visitors</p> |
| 5 | <p>Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk)</p> | <p>General:</p> <ul style="list-style-type: none"> - Continue to monitor relevant information sources for guidance including WHO and host government announcements - Monitor developments in any affected country |

5 (Cont)

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

- Update time analysis of potential business impacts when phase 6 is reached
- Compare actual business impact with predicted impact analysis and adjust plan as necessary
- Implement a change freeze until the first pandemic peak is over
- In UK ensure a thorough knowledge of Part 2 (Emergency Powers) of the Civil Contingencies Act 2004

Operations:

- Invoke contingency plans for businesses in affected and in contiguous countries
- Put businesses in non affected countries on alert to invoke plans for critical activities
- Communicate with stakeholders [*Local staff, JV partners, supply chain and customers*] about likely consequences for product or service quality in Phase 6
- Suspend all unnecessary business travel
- Bring secondary data centre operations area online and staff it [*run concurrent operations shifts alternating between sites – no physical handover, avoiding cross-infection*]
- Monitor staff and staffing situation
- Monitor competitors position
- Provide regular updates to key clients; and vice versa

People:

- Re-emphasise the importance of personal hygiene
- Maintain close contact with staff who have been infected or exposed to pandemic flu and provide support as appropriate
- Monitor situation of and provide support to any business traveller caught in and unable to get out of a country affected by the pandemic
- Communicate latest information, government advice and senior management directives to all staff
- Issue directions that employees who are ill (or think they are ill) are NOT to come



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Tel: +44 (0)1332 222299
Email: info@linkassociates.com
www.linkassociates.com

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| 5 (Cont) | Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk) | into work <ul style="list-style-type: none">- Initiate a methodology to ensure those who contract flu are identified and logged Property: <ul style="list-style-type: none">- Increase frequency of office cleaning programme- Implement strict quarantine and cleaning protocol for any office area that affected staff has occupied- Provide facilities for safe disposal of infected face masks, tissues etc Security: <ul style="list-style-type: none">- Enforce ban on all visitors entering the premises- Enforce entry restrictions on areas within the office that have been quarantined for cleaning and disinfecting |
| PANDEMIC PERIOD | | |
| 6 | Pandemic: increased and sustained transmission in general population | General: <ul style="list-style-type: none">- Continue to monitor relevant information sources for guidance including WHO and host government announcements- Compare actual business impact with predicted impact analysis and adjust plan as necessary- Ensure information regarding who has contracted and survived flu is recorded- Consider whether existing plans need adjustment for a second pandemic wave based upon:<ul style="list-style-type: none">• Likelihood of a vaccine being available• Clinical attack and mortality rates• Numbers who will be immune- Capitalise emerging business opportunities |



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Prepared by Jamie Jameson

Tel: +44 (0)1332 222299
Email: info@linkassociates.com
www.linkassociates.com

6 (Cont)

Pandemic: increased and sustained transmission in general population

Operations:

- Monitor viability and be prepared to reduce or suspend work
- Ensure continuing knowledge management
- Activate insurance policies if appropriate
- Communicate any degradation or suspension of operations to stakeholders immediately
- Facilitate and provide IT support as required to back-up facilities or other remote access alternatives
- Review impacts on key infrastructure
- Plan for business recovery; take into account potential for 2nd and 3rd pandemic wave
- Monitor supply chain impacts

People:

- Provide additional support as necessary in the event of fatalities amongst staff or relatives of staff

Property:

- Coordinate with building management and local government authorities in respect of quarantine orders, building disinfecting etc

Security:

- Secure site in the event operations are suspended

IMPLICATIONS FOR THE UK

Should the UK have cases of influenza during the pre-pandemic period, the international phases apply. Once a pandemic has been declared, a UK-specific alert mechanism has been developed which is consistent with the alert levels used in other UK infectious disease response plans:

| UK ALERT LEVEL | DESCRIPTION |
|----------------|---|
| 1 | Cases only outside the UK (in a country or countries with or without extensive UK travel/trade links) |
| 2 | New virus isolated in the UK |
| 3 | Outbreak(s) in the UK |
| 4 | Widespread activity across the UK |

POLICIES / STRATEGIES TO BE CONSIDERED

- Operating:
 - Working through the pandemic cycle – when will demand for own services be high and low in relation to the peaks and troughs
 - Working through a pandemic wave
 - Return to business as usual post pandemic
- General:
 - Consideration of which policies might alter staff conditions of employment
 - Continuous review of WHO and UK alert phases
 - Trigger points for the invocation of pandemic business continuity measures
 - Trigger points for activation of mitigation and recovery measures linked to WHO and / or UK alert phases
 - Dynamic review of actual and potential business impacts

- Dynamic risk management
- Re-evaluation of 'Risk Appetite'
- Implementation of a change freeze to avoid unnecessary changes that may impact management; production; services
- Dynamic review of potential opportunities
- Employees:
 - Information and briefings
 - Refusing to travel abroad to Avian Flu infected areas at WHO Phases 4 and 5
 - To ensure that staff who are ill, or believe they are ill, do not come into work
 - Paying absentee staff - who refuse to come to work for fear of contracting flu; absent themselves on personal grounds to look after children, relatives etc; cannot get to work due to a breakdown of the transport system or Government restrictions on movement
 - Reducing the risk of infection
 - Knowledge management
 - Staffing - home working; rolling basis with some working from home, and some in the office; or working from alternate location
 - Quarantine measures – employees caught and not permitted to leave workplace locality; not permitted to enter workplace locality; staff to bring their child/children into work if schools quarantined
 - Policy on payment during voluntary and enforced quarantine
 - Succession in the event of death of key personnel; cross training to avoid skill shortages; increase certification where appropriate
 - Return to work policies - after visiting infected areas of the world; after displaying flu symptoms
- Travel
 - How to reduce the need for business travel
 - Advice to those travelling on business
 - Advice to those travelling on holiday

REFERENCES

World Health Organisation:

www.who.int/csr/disease/avian_influenza/pandemic/en/index.html

Avian Influenza; assessing the pandemic threat (*WHO/CDS/2005.29*)

Responding to the avian influenza pandemic threat. Recommended Strategic Actions (*WHO/CDS/CSR/GIP/2005.8*)

Global influenza preparedness plan (*WHO/CDS/CSR/GIP/2005.5*)

Checklist for influenza pandemic preparedness planning (*WHO/CDS/CSR/GIP/2005.4*)

Handbook for Journalists (*WHO/CDS/2005.37*) - website : www.who.int/csr/don/Handbook_influenza_pandemic_dec05.pdf

UK Government

UK Resilience – website: <http://www.ukresilience.gov.uk/pandemicflu.aspx>

National Framework for Responding to an Influenza Pandemic (*November 2007*) – website:
www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_080734

Supplements to National Framework for Responding to an Influenza Pandemic (*Various dates*) – website:
www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_080734

UK Critical Sector Plans: - website: www.ukresilience.gov.uk/pandemicflu/plans.aspx

Pandemic Influenza Checklist for Businesses (*May 2006*) – website:
www.ukresilience.gov.uk/~media/assets/www.ukresilience.info/060516flubcpchecklist%20pdf.ashx

Health Protection Agency Influenza Pandemic Contingency Plan (*September 2006*) – website:
www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1194947380783

Health and Safety Executive – Guidance - website : www.hse.gov.uk/biosafety/diseases/pandemic.htm

Emergency Response and Recovery – Guidance – website: www.ukresilience.gov.uk

Scottish Executive Health Department: - website: www.scotland.gov.uk/Topics/Health/health/AvianInfluenza



PANDEMIC FLU CONTINGENCY

Prepared by Jamie Jameson

Tel: +44 (0)1332 22299
Email: info@linkassociates.com
www.linkassociates.com

Other:

US Department of Health and Human Services – *website* : www.pandemicflu.gov

US Centre for Disease Control and Prevention – *website* : www.cdc.gov/flu/avian/index.htm

Australian Government - *website* : www.pandemic.net.au

Canadian Government – *website* : www.influenza.gc.ca/index_e.html

New Zealand Government – *website*: www.moh.govt.nz/pandemicinfluenza