

# DYFED-POWYS LOCAL RESILIENCE FORUM

## JOINT AGENCY ARRANGEMENTS FOR MANAGING PANDEMIC INFLUENZA



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This plan has been endorsed by the Local Resilience Forum and is based on co-ordinated response by Category One and Two responders whose area of responsibility requires a response capability in the Dyfed-Powys area.

This version of the plan has a PROTECT classification.

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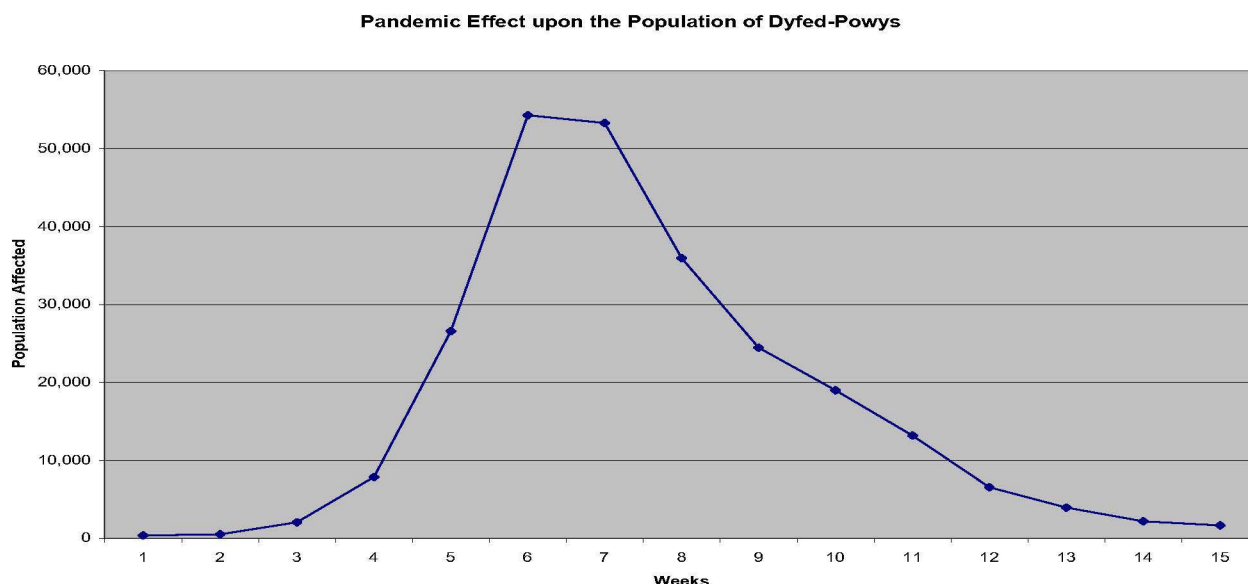
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## PART 1 – SUMMARY OF ARRANGEMENTS

### 1. Introduction - What is Pandemic Influenza and how will it affect us?

Pandemic influenza is likely to arrive from abroad and will pose a significant threat to the health of the population of the United Kingdom. It infects humans and spreads widely from person to person because a high proportion of the population is susceptible, with little or no immunity from previous infection or immunisation. Persons who have contracted influenza are generally highly infectious for four to five days and will be absent from work for around ten days. It is likely that the United Kingdom will receive approximately two weeks notice of the start of a pandemic which is anticipated to strike the population in a wave of 15 weeks. Pandemic Influenza is risk reference H23 on the Dyfed-Powys LRF Community Risk Register and is one of the highest risks at both a local and national level.

Worst case scenario forecasts suggest that up to 50% of the population will be affected by the disease. The attack of pandemic influenza upon the public within Dyfed-Powys will be in the form of a wave as described in the following graph.



**Figure 1: Pandemic effect (cases) on the population of Dyfed- Powys**

A pandemic has the potential to overwhelm normal arrangements and responding organisations will themselves suffer reduced capabilities through staff shortages. The 'worst case' mortality rate of 2.5% of flu sufferers could see up to 6,434 deaths for the population of Dyfed-Powys. This would overwhelm current registration, storage and funeral capacities.

Pandemic Influenza therefore requires implementation of extraordinary control measures.

Further information on the possible effects of a pandemic can be found at Part 2 – Planning Assumptions

### 2. Aim of the Arrangements

The aim of this document is to establish widely understood arrangements for responding to a pandemic influenza emergency and enable partner organisations to undertake an integrated response to a major pandemic influenza outbreak. These arrangements are based on 3 key principles that underpin the planning and response:

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- **Precautionary** – plan for an initial response that reflects the level of risk, based on information available at the time, accepting the uncertainty that will initially exist about the scale, severity or level of impact of the virus.
- **Proportionality** – plan to be able to scale up and down in response to the emerging epidemiological, clinical and virological characteristics of the virus and its impact at the time.
- **Flexibility** – plan for the capacity to adapt to local circumstances that may be different from the overall UK picture – for instance in hotspot areas.

### 3. Triggers to Implement Arrangements

It is likely that the United Kingdom will receive a probably receive two weeks notice of the start of a pandemic and the UK National and Welsh Governments will institute arrangements. The possibility of the virus appearing in the UK or local population cannot however be ruled out. The decision to activate the plan will made by the Strategic Co-Ordinating Group, based on one of the following triggers:

- Based on national guidance
- Isolation of the virus in the UK
- Isolation of the virus within the local population

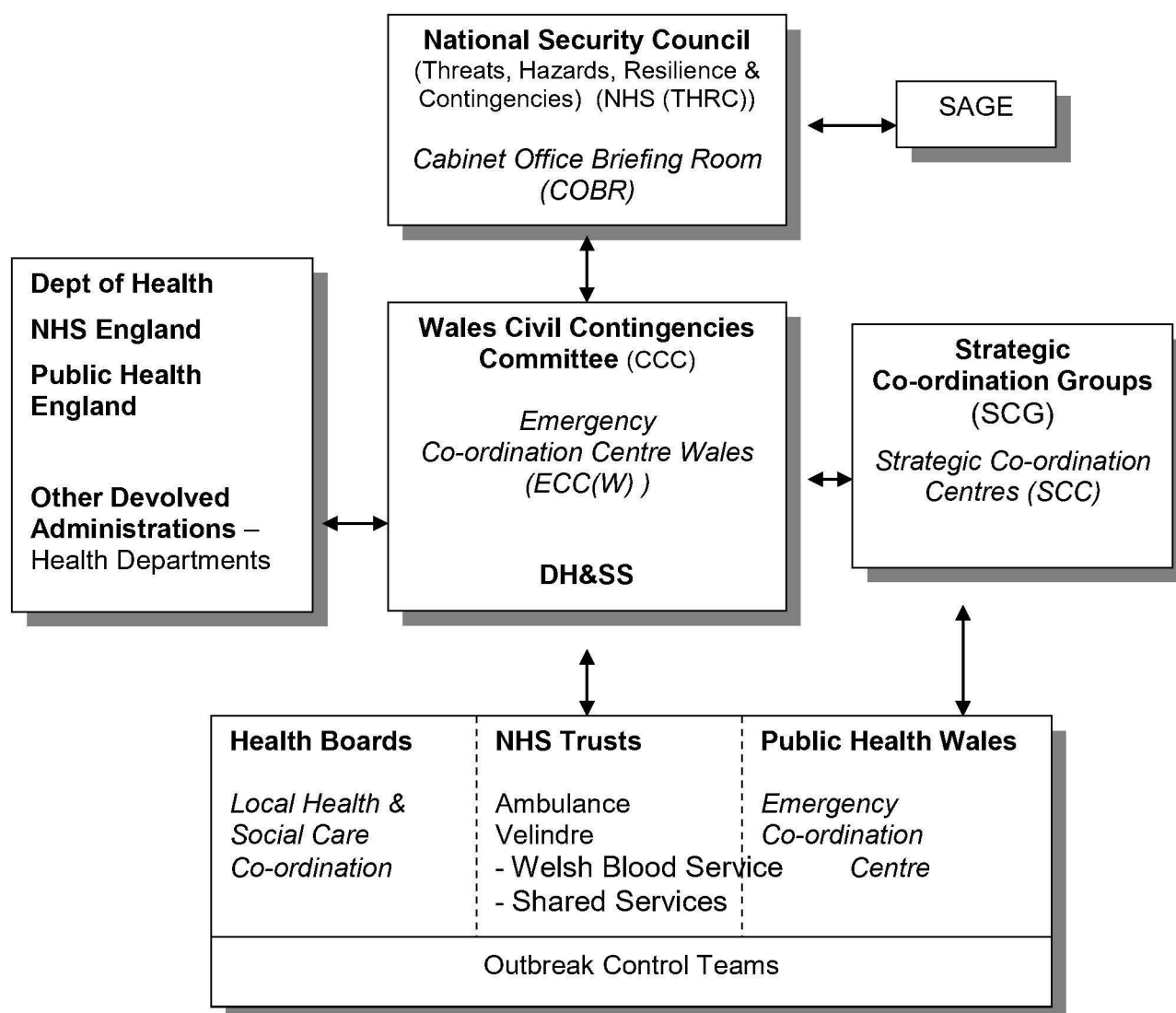
#### Triggers to Stand Down

The decision to stand down the arrangements will be made by the Strategic Co-Ordinating Group, based on a number of factors and responder's ability to cope.

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#### 4. Co-ordination Arrangements for Major Infectious Disease Emergencies in Wales:



#### 5. Implementing Arrangements – Who does What, When & How?

##### a) UK Co-ordination

In the event of a major outbreak threatening or affecting the UK, the Cabinet Office Briefing Room (COBR) will be established to provide for cross-departmental co-ordination at UK Government level. There will be regular meetings of the Civil Contingencies Committee (CCC) and the Civil Contingencies Committee (Officials) (CCC(O)). The Welsh Assembly will normally be invited to attend both meetings. A video link will be made available where possible.

The Department of Health (DH) will be the lead central government department and will arrange the co-ordination and monitoring of the UK health response. DH will provide input to COBR and international liaison through the World Health Organisation (WHO) and the European Union.

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DH will activate its Emergency Room and co-ordinate health communications with the NHS, the HPA and UK Health Departments. The Civil Contingencies Secretariat (CCS) will ensure that information and advice from DH is co-ordinated with other government information and circulated to central government departments and the Assembly.

## **b) Wales Co-ordination**

Co-ordination of the multi-agency response in Wales will be in accordance with the Pan Wales Response Plan. The Welsh Government will implement arrangements to establish the Emergency Co-ordination Centre Wales (ECCW) to co-ordinate the emergency across Wales. The Wales Civil Contingencies group will convene to support the health response and to consider the wider social/economic effects of the outbreak.

The lead for health for the Welsh Government will be the Chief Medical Officer, whose office will establish the Emergency Co-ordination Centre Wales Health Team to co-ordinate the health response across Wales. The Health Team will provide a conduit for liaison with Department of Health and other UK Health Departments and will establish arrangements for providing health briefings for Welsh Ministers and COBR.

Public Health Wales will also establish a National Co-ordination Centre to co-ordinate the response of local outbreak control teams across Wales. If requested, the PHW Co-ordination Centre will provide a liaison officer within the Health Team based in the Emergency Co-ordination Centre Wales.

## **c) LRF Co-ordination Arrangements**

The Dyfed-Powys Local Resilience Forum will convene as a Strategic Co-ordinating Group to co-ordinate its response to Pandemic Influenza and to align itself with National Co-ordination arrangements. It may need to employ extraordinary measures to support the health response and consider the wider social / economic effects of the outbreak. A Strategic Co-ordination Group convened in response to pandemic influenza is likely to operate for several weeks. This plan may be implemented by Dyfed Powys SCG as a result of significant pressures caused by Influenza regardless of decisions taken by ECCW/COBR in line with SCG/SCC activation procedures.

## **d) Strategic Co-ordination Group**

The Strategic Co-ordination Group (SCG) will be a multi-agency group, convened and chaired by the Chief Constable or nominated officer. It will be based at Police Headquarters, Carmarthen, but meetings may be convened via video or audio conferencing to minimise executive abstraction. Membership will include Chief Executives or their nominees of Category One and Two Responders as defined by the Civil Contingencies Act 2004 and representatives of other agencies as required. It is imperative that each representative on the Strategic Co-ordination Group has a nominated deputy.

The role of the Strategic Co-ordination Group will be to ensure the effective and efficient maintenance of healthcare delivery to the population and the maintenance of the community infrastructure of Dyfed-Powys. The SCG will be convened at Strategic Co-ordination Centre Level 2 Activation. Specific arrangements are detailed within the LRF Strategic Co-ordination Centre Activation Protocol

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The SCG will:

- Gather and disseminate data/information on the impact of additional deaths on the death management process, and identify any current or potential shortcomings. Data should be reported up to ECC(W)/WCCC and to national healthcare agencies as prescribed in the agreed LRF multi-agency plan. National / Wales messages should also be disseminated at a local level.
- Continually assess the effectiveness of the agreed LRF multi-agency plan and make modifications to the response as appropriate.

To assist the running of the SCG, a Health Emergency Co-ordination Centre and a Communications / Media Cell will operate to co-ordinate the response between local and regional bodies.

#### **e) Multi-Agency Tactical Co-ordination Group (Silver)**

Groups may be formed representing each Health Board area of the Dyfed-Powys LRF area, comprising senior staff from Category One and Category Two responders as defined by the Civil Contingencies Act 2004 and other bodies as deemed necessary. The chair will be determined by the group.

The main responsibilities of the group will include:

- Providing the tactical response for the LRF
- The provision of effective and efficient health & social care delivery to the community.
- Ensuring that relevant Pandemic Influenza Plans are implemented in a co-ordinated manner across the county. Ensuring effective links and liaisons with outbreak control team where it is established.
- Ensuring that the SCG are made aware of areas of concern.
- Ensuring efficient communication between all relevant bodies.
- Assessing the need for additional resources to manage the delivery of health & social care.
- The collation and provision of situation reports to the SCG.
- Ensuring that consistent and timely advice is available to the public which assists and supplements advice from the SCG and HECC.
- To review and agree the content of releases to the local media and identify local spokespersons.
- Upon entering the post-pandemic period, organisation of single and multi-agency debriefs.

**Timing:** The group will meet as appropriate in order to assist with the compilation of situation reports to the SCG. It may convene using video conference links or using telephone conference facilities.

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## **f) Agency Outbreak Control Teams**

Outbreak Control Teams will be established by individual organisations to ensure that their own individual response plans are activated.

Their main responsibilities will be ensuring:

- The implementation of organisational plans
- That operational information is available to response partners.
- That Business Continuity measures are implemented in order to maintain normality as far as is reasonably practicable.
- Where possible to provide assistance to other responders to aid delivery of their essential functions.

## **g) Scientific and Technical Advice Cell (STAC)**

During a pandemic, STAC will normally operate at an All Wales level. However, should there be any issues particularly pertinent to Dyfed Powys, the Strategic Co-ordination Group has the ability to feed requests to the All Wales STAC, via ECCW, to provide specialist advice.

## **6. Business Continuity Management**

A pandemic influenza emergency will place considerable pressure on all organisations and the business sector, causing staff absence, travel disruption and supply chain difficulties. It is important to have a clearly identified individual or team responsible for business continuity management and that this role is a key part of the management structure of the organisation. For Category 1 Responders, It is the organisation's statutory responsibility to ensure business continuity plans are in place and those who work within the organisation are aware of the plans and what they involve.

Organisations will also need to be aware of and plan for the consequences of measures that government may recommend to control or delay the spread of influenza (*such as closing public access areas*). Decisions on such actions will normally remain for local determination based on advice and recommendations issued by the appropriate Government Departments. However, organisations must have Business Continuity measures in place to deal with and support arrangements put in place by Government Departments.

## **7. Training and Exercising**

The Local Resilience Forum and Strategic Co-ordination Group will need to undertake a training and exercise programme so that they are familiar with the premises, equipment and managerial thought processes needed to respond to an emergency. The following arrangements address the training and exercise needs with regard to the response to an influenza pandemic emergency.

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## Training

The importance of training to respond to a pandemic cannot be underestimated. It is the responsibility of the Local Resilience Forum to bring these arrangements to the attention of its membership and that of the Strategic Co-ordination Group. It is important that members of the Strategic Co-ordination Group, especially those newly appointed are fully conversant with their roles prior to a pandemic situation.

The Local Resilience Forum will therefore undertake a periodic review of training needs for members with responsibilities under these arrangements in order to ensure that they are appropriately trained to undertake their role. A joint training needs analysis will be used to identify staff that should participate in single or joint agency training opportunities. It may be practicable for the Local Resilience Forum and Strategic Co-ordination Group to participate in joint training opportunities.

Where training is undertaken, the Local Resilience Forum Partnership Team will be responsible for maintaining a record of such training together with the staff that have attended.

## Exercising

As outbreaks of pandemic influenza are not common, it is essential that key responders exercise and practice their roles. This not only serves to keep the procedure fresh in their minds, it also allows any weaknesses in procedure to be addressed. It also allows newly appointed members to participate and become familiar with their roles. For these reasons it is necessary to exercise the whole or specific parts of these arrangements. The exercise programme will need to be derived, in part, from the training needs analysis. The following is a recommended schedule of training and exercising for these arrangements.

Training Needs Analysis	Undertaken periodically or any significant change in membership of the Local Resilience Forum or Strategic Co-ordination Group.
Training	Events to raise awareness of the current circumstances and consequences of a pandemic influenza outbreak.
Exercising	The alert mechanism employed by the LRF to assemble the Strategic Co-ordination Group must be tested in line with the SCG activation protocol.
	Table -Top. Participation by members of the SCG in multi-agency exercise
	Live - SCG is assembled to deal with the effect of a pandemic influenza outbreak

**Table 1 – Training & Exercising**

## PART 2 – PLANNING ASSUMPTIONS

Response arrangements must be flexible enough to deal with a range of possibilities and be capable of adjustment as they are implemented. The planning assumptions are:

- A pandemic could occur at any time. Intervals between recent pandemics have varied from about 10 to 40 years with no recognisable pattern, the last being in 2009.
- A new virus may emerge at any time of the year;
- Initially, pandemic influenza activity in the UK may last for three to five months, depending on the season. There may be subsequent waves, weeks or months apart;
- Spread from the country of origin is likely to follow the main routes of travel and trade;
- Spread from the source country to the UK through movement of people is likely to take two to four weeks;
- From arrival in the UK, it will probably be a further one to two weeks until sporadic cases and small clusters that will act as initiators of local epidemics are occurring across the country;
- The incubation period is in the range of one to four days (typically two to three). People are highly infectious for four to five days from the onset of symptoms and may be absent from work for up to ten days;
- Some people may be infected without showing symptoms, but nevertheless may shed the virus and pass on the infection;
- Without intervention, and with no significant immunity in the population, historical evidence suggests that one person infects about 1.4 to 1.8 people on average. This number is likely to be higher in closed communities such as residential homes or boarding schools;
- More severe illness than the usual seasonal influenza is likely in all population groups, with a higher number of people than usual developing severe prostration and rapidly fatal overwhelming viraemia, viral pneumonia or secondary complications;
- To inform planning, response plans should consider the potential impacts of a 25%, 35% and 50% clinical attack rate and overall case fatality rates of 0.4%, 1%, 1.5% and 2.5% of those with influenza symptoms;
- Up to 28.5% of symptomatic patients (including all children under three) will require assessment and treatment by a general medical practitioner or suitably experienced nurse;
- Up to 4% of those who are symptomatic may require hospital admission if sufficient capacity were to be available;
- Up to 22% of influenza cases can be expected during the 'peak week' of a pandemic;
- Average length of stay in hospital of six days for patients not requiring critical care;
- Average length of stay in hospital of ten days for patients requiring critical care;
- The UK case fatality rate in previous pandemics was between 0.2% and 2%;
- Evidence from previous influenza pandemics suggests a maximum case fatality of 2.5% is a reasonable worst case scenario for planning purposes.

The potential impact of an influenza pandemic each county in Dyfed-Powys is below.

Clinical cases	25% attack rate	35% attack rate	50% attack rate
Carmarthenshire	45,950	64,330	91,900
Ceredigion	18,975	26,565	37,950
Pembrokeshire	30,600	42,840	61,200
Powys	33,150	46,409	66,299
<b>Total</b>	<b>128,675</b>	<b>180,144</b>	<b>257,349</b>

Deaths (2.5%)	25% attack rate	35% attack rate	50% attack rate
Carmarthenshire	1,149	1,608	2,298
Ceredigion	474	664	949
Pembrokeshire	765	1,071	1,530
Powys	829	1,160	1,657
<b>Total</b>	<b>3,217</b>	<b>4,503</b>	<b>6,434</b>

Hospital admissions (4%)	25% attack rate	35% attack rate	50% attack rate
Carmarthenshire	1,838	2,573	3,676
Ceredigion	759	1,062	1,518
Pembrokeshire	1,224	1,714	2,448
Powys	1,326	1,856	2,652
<b>Total</b>	<b>5,147</b>	<b>7,205</b>	<b>10,294</b>

*Table 2 - Modelling data over the course of a local pandemic*

Pandemic Influenza is likely to emerge in the form of a wave as below;

	Ceredigion	Carmarthenshire	Pembrokeshire	Powys	Total
<b>Population (from 2011 census)</b>	<b>75,900</b>	<b>183,800</b>	<b>122,400</b>	<b>132,598</b>	<b>514,698</b>
<b>Week</b>	<b>Assuming 50% attack rate</b>				
1	55	132	88	95	370
2	78	188	125	135	526
3	311	753	501	543	2,108
4	1,184	2868	1910	2069	8,031
5	4,004	9696	6457	6995	27,152
6	8,179	19807	13190	14289	55,465
7	8,031	19447	12950	14029	54,457
8	5,416	13115	8734	9461	36,726
9	3,686	8927	5945	6440	24,998
10	2,863	6932	4616	5001	19,412
11	1,985	4808	3202	3468	13,463
12	988	2393	1594	1727	6,702
13	594	1439	958	1038	4,029
14	327	792	528	572	2,219
15	249	602	401	435	1,687
<b>Total</b>	<b>37,950</b>	<b>90,900</b>	<b>61,200</b>	<b>66,299</b>	<b>256,349</b>

*Table 3 – Effect of pandemic on the population of Dyfed-Powys, by Local Authority area*

## 8. Impact on Health and Social Care

Many workers will take some time off during the pandemic period. They may need to care for family, sick relatives or dependants and/or suffer bereavement. Absenteeism may be higher because of difficulties (or fear of) travelling to work on public transport. Health care workers may have a higher than average sickness absence rate due to higher risk of exposure.

The impact of an outbreak on health and social services may be intense, sustained and the services may become overwhelmed with no mutual aid available from neighbouring organisations. Some of the likely issues resulting from an outbreak are shown below:

All workforces	<ul style="list-style-type: none"> <li>• Staff sickness or death, bereavement and workforce depletion</li> <li>• Disruption to supplies and utilities</li> <li>• Business continuity</li> <li>• Communications with staff</li> <li>• Domestic pressures on staff if schools close of children ill</li> <li>• Surge capacity</li> </ul>
Health Boards	<ul style="list-style-type: none"> <li>• Higher A&amp;E attendance</li> <li>• Pressure on Intensive Care beds, equipment and staff</li> <li>• Infection control processes</li> <li>• Bed blocking because of reduced community capacity</li> <li>• Existing patients affected</li> <li>• Complexity of added infection control measures</li> <li>• Managing demand for anti-virals / vaccine</li> <li>• Need to draft in volunteers (indemnity / CRB checks)</li> <li>• Communications with staff, patients and clients</li> </ul>
Intermediate care	<ul style="list-style-type: none"> <li>• Pressure on admissions</li> <li>• Difficulty in admitting patients to secondary care</li> <li>• Higher transmission among residential institutions</li> <li>• Primary care (GPs, District Nurses)</li> <li>• Illness and deaths at home</li> <li>• Difficulties in arranging hospital admissions / increase in early discharges</li> <li>• Staff sickness – especially in single handed practices</li> </ul>
Social care	<ul style="list-style-type: none"> <li>• Sickness in clients / carers</li> <li>• High transmission in residential homes / day care</li> <li>• Children whose parents are too ill to care for them including children at home on the child protection register, children with significant disabilities / continuous nursing needs at home etc</li> <li>• Foster Carers too ill to care for Looked After Children</li> <li>• Restriction on admissions to Residential / Nursing Care</li> <li>• Added pressures on Care in the Community with less staff</li> <li>• Potential increase of service users no longer capable of living at home</li> <li>• Prioritised list of those most in need of Adults and Children's Services</li> <li>• Impact on income to the Private and Independent Sector Care and Nursing Homes if restriction on admissions</li> <li>• Impact on Health i.e. Bed Blocking due to reduced Community Services</li> </ul>



Others	<ul style="list-style-type: none"> <li>• Pressure on mortuary, crematoria and cemetery facilities</li> <li>• Pressure on funeral directors and body transportation capacity</li> <li>• Logistical problems due to interruption of supplies, utilities and transport;</li> </ul> <p><b>Contracted services;</b></p> <ul style="list-style-type: none"> <li>• Long term effects on the national and world economies and societal structures</li> </ul>
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*Table 4 – issues resulting from an influenza pandemic*

## **9. Options for mitigating the impact**

### **a) International travel, border restrictions and screening**

There are no plans to attempt to close borders in the event of an influenza pandemic. The UK generally has a high level of international connectivity, and so is likely to be one of the earlier countries to receive infectious individuals.

The economic, political and social consequences of border closures would be very substantial, including risks to the secure supply of food, pharmaceuticals and other supplies

### **b) Pre pandemic vaccine**

Pre first wave immunisation with an influenza vaccine related but not specific to the pandemic strain might offer some limited, but nonetheless useful, protection. Pre pandemic vaccination would be initiated based on national and international expert advice and delivery would primarily be the responsibility of employers.

### **c) Isolation, voluntary quarantine and social distancing**

Influenza is likely to spread rapidly in closed establishments such as military bases, 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. As opportunities for closure, quarantine, isolation or social distancing may be limited, it is vital that resilient arrangements are developed in advance of an outbreak

### **d) Antiviral medicines**

When used to treat seasonal influenza, antiviral medicines reduce the length of symptoms and usually their severity, as long as they start to be taken within two days of the onset of symptoms. Whilst it is impossible to predict whether antiviral medicines will be equally effective against a new or modified pandemic virus, it is reasonable to anticipate a similar effect and associated substantial reductions in severe morbidity.

The UK Government plans to hold national stockpiles of anti-virals (currently Oseltamivir (Tamiflu). The existing stockpiles allow for the treatment of all symptomatic patients. Scientific advice confirms that prompt treatment of all symptomatic patients is currently the most effective use of the antiviral stocks available. Operational plans should aim to make antiviral medicines available to all patients who have been symptomatic for less than 48 hours, preferably within 12 and no more than 24 hours from reporting symptoms indicative of influenza. For further information see Part 5 – Vaccines and Anti-virals.

### **e) Infection control and personal hygiene**

Applying basic infection control measures and encouraging compliance with public health advice are likely to make an important contribution to the UKs overall response. Simple measures to help individuals to protect themselves and others are:

- Staying at home when ill
- Covering the nose and mouth with a tissue when coughing and sneezing
- Disposing of dirty tissues promptly and carefully
- Washing hands frequently with soap and warm water
- Cleaning frequently touched hard surfaces regularly using normal cleaning products

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- Avoiding crowded gatherings where possible, especially in enclosed spaces
- If suffering influenza symptoms, wearing a disposable face mask to protect others should you need to go out (e.g. To the hospital)
- Making sure that children follow this advice

#### **f) Use of face masks and respirators**

Although the perception that wearing a face mask in public places may be beneficial is widely held, there is little actual evidence of proportionate benefit from widespread use. The Government will not be stockpiling face masks for general use. Face masks can be used to help protect those who may, for example, be at occupational risk from close or frequent contact with symptomatic patients.

#### **g) Internal travel restrictions**

Modelling suggests that internal travel restrictions would have little positive impact on the total number infected by influenza over the entire course of the pandemic. The public may be advised to minimise non essential travel as a personal precautionary measure but to continue using public transport for essential journeys, adopting good personal hygiene measures.

#### **h) Restrictions on public gatherings**

The Government is unlikely to recommend a blanket ban on public gatherings. However, informed judgements by the event organiser may become necessary at the time.

#### **i) School closures**

There is modelling data highlighting the potential benefit of school closures in certain circumstances, both in terms of protecting individual children from infection and in reducing overall transmission of the virus in the population. However, to be effective prolonged closures are required. This would involve schools over a wide area, but carries a risk that social mixing of children outside school would defeat the object of the closures. However, under some circumstances head teachers and their Boards of Governors may take the decision to close individual establishments temporarily (in line with the UK Pandemic Preparedness Strategy 2011 principles).

#### **j) Pandemic specific vaccination**

The development of a new pandemic-specific vaccine can only begin once the new pandemic influenza viral strain has been identified and isolated. Arrangements have been put in place by the European Medicines Agency (EMA) to enable manufacturers to conduct studies with prototype pandemic-specific vaccines and seek approval of 'mock up' licences in the inter-pandemic period. These studies mean that the form of pandemic-specific vaccine will already have undergone detailed clinical trials, including safety studies, which allows the new vaccine to be licensed and available for use as quickly as possible - for further information see Part 5 – Vaccines and Antivirals.

## 10. Demographic Profile, Vulnerable Groups & Closed Communities

The Local Resilience Forum as part of its pandemic influenza preparedness planning, has studied the demographics of the local population. Identification of vulnerable groups or others who may become vulnerable during a pandemic will support agencies in preparing a response to the expected demand for care with the resources available. Individuals are considered vulnerable if they are more susceptible to complications or death from influenza or if they are less able to help themselves in an emergency.

Individuals who are more susceptible to complications from influenza include those with co-morbidity, (heart conditions, chronic lung disease, diabetes, renal disease, HIV, sickle cell anaemia etc) children under two years of age, children previously treated with acetylsalicylic acid, pregnant women in the second and third trimester of pregnancy and residents of long term care homes. Healthy adults over the age of 65 are also at some increased risk. In the 2011 census, in Dyfed-Powys 77,680 (15.08% of the population) were adults aged 70 and over, above the UK average.

In the 2011 census, 118,694 (23%) in Dyfed-Powys were recorded as suffering from a long term illness. 63,941 (12.42%) were recorded as unpaid carers. This demonstrates that a high proportion of the population could be rendered vulnerable if they or their carers fall ill.

Local Authorities, community health services, the independent sector and voluntary organisations currently provide support to many individuals so that they can enjoy independent living in their own homes. This support will need to continue during a pandemic against a background of staff absences of up to 50%. The demand for home care will increase further as unpaid carers become ill or hospitalised and others in the community although independent now, when ill, may require support. Included in this latter group are the elderly living alone who do not have family support. In the 2011 census, 31% of households had single occupants, accounting for 13.4% of the population. Single parents with dependent children may likewise not have support from family / friends.

An outbreak of an infectious disease may spread rapidly in closed communities such as schools and colleges. In 1957, up to 50% of school children developed influenza and in residential schools attack rates reached 90%, often affecting the whole school within two weeks. This will affect working parents, but closing schools also has a significant effect on business continuity and maintenance of essential services. Similar spread is likely in other closed communities such as military barracks, care homes and educational establishments



## PART 3 - ALERT MECHANISMS

It is vitally important that the LRF and its constituent Category 1 & 2 responders act cohesively if the Pandemic phase changes. The following alert mechanism has therefore been developed to achieve this aim.

Alert Phase	Indicator	Focus	Notifications
Detection	Novel influenza virus outside the UK	<ul style="list-style-type: none"> <li>Intelligence gathering from countries already affected.</li> <li>Enhanced surveillance within the UK.</li> <li>The development of diagnostics specific to the new virus.</li> <li>Information and communications to the public and professionals.</li> </ul>	<p><b>PHW</b> Will notify the Dyfed-Powys LRF Health Group of situation and will monitor and advise as appropriate.</p> <p><b>Health Emergency Planning Co-ordination Group</b> Will be made aware of the situation, and updated accordingly. Group to review preparatory aspects of response plans.</p> <p><b>Local Resilience Forum</b> – Will be made aware of the situation, and updated accordingly.</p>
Assessment	Novel influenza virus within the UK	<ul style="list-style-type: none"> <li>The collection and analysis of detailed clinical and epidemiological information on early cases, on which to base early estimates of impact and severity in the UK.</li> <li>Reducing the risk of transmission and infection with the virus within the local community by: <ul style="list-style-type: none"> <li>actively finding cases;</li> <li>self isolation of cases and suspected cases; and</li> <li>treatment of cases / suspected cases and use of antiviral prophylaxis for close / vulnerable contacts, based on a risk assessment of the possible impact of the disease.</li> </ul> </li> </ul>	<p><b>PHW</b> Will notify the Dyfed-Powys LRF Health Emergency Planning Co-ordination Group of the change in alert status, monitor the situation and advise as appropriate.</p> <p><b>LRF Health Emergency Co-Ordination Centre</b> Will be placed on standby to meet.</p> <p><b>Local Resilience Forum</b> Will place the Strategic Co-ordination Group on standby to meet.</p> <p><b>Cat 1 &amp; 2 Responders</b> Pandemic lead to advise organisations and to activate preparatory aspects of the pandemic response plan.</p>
Treatment	Escalating outbreaks within the UK	<ul style="list-style-type: none"> <li>Treatment of individual cases and population treatment via the NPFS, if necessary.</li> <li>Enhancement of the health response to deal with increasing numbers of cases.</li> <li>Consider enhancing public health measures to disrupt local transmission of the virus as appropriate, such as localised school closures based on public health risk</li> </ul>	<p><b>PHW</b> Will notify the Dyfed-Powys LRF Health Group of the change in alert status, monitor the situation and advise the Pandemic Response Groups as appropriate.</p> <p><b>Health Emergency Co-ordination Centre</b> The Health Emergency Co-ordination Centre will be convened as required.</p> <p><b>Strategic Co-ordination Group</b> Will meet as required</p> <p><b>Multi-agency Co-ordination</b></p>

Dyfed-Powys Local Resilience Forum  
Joint Agency Arrangements for Managing an influenza pandemic

		<p>assessment.</p> <ul style="list-style-type: none"> <li>Depending upon the development of the pandemic, to prepare for targeted vaccinations as the vaccine becomes available.</li> </ul>	<p><b>Groups (Silver)</b> Will be placed on standby to meet <b>Cat 1 &amp; 2 Responders</b> Will activate organisational pandemic response plans</p>
Escalation	Widespread activity - demands on services start to exceed available capacity	<ul style="list-style-type: none"> <li>Escalation of surge management arrangements in health and other sectors.</li> <li>Prioritisation and triage of service delivery with aim to maintain essential services.</li> <li>Resiliency measures, encompassing robust contingency plans.</li> <li>Consideration of de-escalation of response if the situation is judged to have improved sufficiently.</li> </ul>	<p><b>PHW</b> Will activate and maintain full pandemic operational response <b>Health Emergency Co-ordination Centre</b> Will activate and maintain full pandemic operational response <b>Strategic Co-ordination Group</b> Will activate and maintain full pandemic operational response <b>Multi-agency Co-ordination Groups (Silver)</b> Will activate and maintain full pandemic operational response <b>Cat 1 &amp; 2 Responders</b> Will activate and maintain full pandemic operational response</p>
Recovery	Influenza activity significantly reduced or within acceptable parameters	<ul style="list-style-type: none"> <li>Normalisation of services, perhaps to a new definition of what constitutes normal service.</li> <li>Restoration of business as usual services, including an element of catching-up with activity that may have been scaled-down as part of the pandemic response e.g. reschedule routine operations.</li> <li>Post-incident review of response, and sharing information on what went well, what could be improved, and lessons learnt.</li> <li>Taking steps to address staff exhaustion.</li> <li>Planning and preparation for a resurgence of influenza, including activities carried out in the Detection phase.</li> <li>Continuing to consider targeted vaccination, when available.</li> <li>Preparing for post-pandemic seasonal influenza.</li> </ul>	<p><b>PHW</b> Will continue to monitor the situation but will start to reduce full pandemic operational response. Will return to normal service as and when appropriate. <b>Health Emergency Co-ordination Centre</b> Will continue to monitor the situation but will start to reduce full pandemic operational response. Will stand down as and when appropriate. <b>Strategic Co-ordination Group</b> Will continue to monitor the situation but will start to reduce full pandemic operational response. Will stand down as and when appropriate. <b>Multi-agency Co-ordination Groups (Silver)</b> Will continue to monitor the situation but will start to reduce full pandemic operational response. Will stand down as and when appropriate. <b>Cat 1 &amp; 2 Responders</b> Will continue to monitor the situation but will start to reduce full pandemic operational response. Will return to normal service as and when appropriate.</p>

**Table 6 – Actions and notifications at various alert stages**

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## 11. Communication Arrangements

Good communication will be fundamental to mounting an effective and efficient response to an Influenza Pandemic in Dyfed-Powys. The following communication system will ensure that all Category One and Two responders with responsibility in Dyfed-Powys are made aware of any change in the Pandemic Phase in a timely and consistent manner.

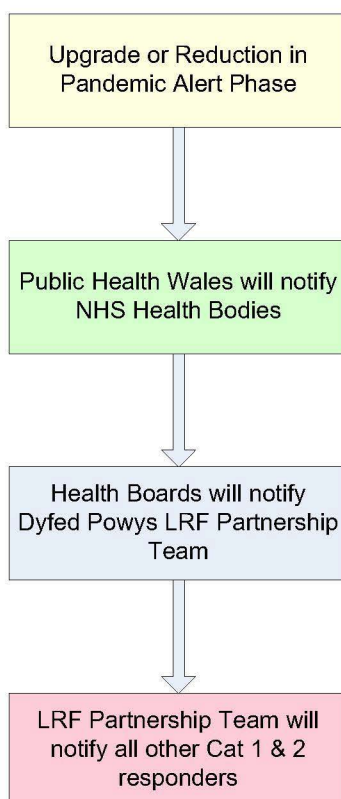
### The Communication System

Based on the *UK Influenza Pandemic Strategy 2011* the Welsh Government will determine the Pandemic Phase in Wales based upon information from the WHO, Dept of Health and PHW. It is the role of PHW to communicate any change directly to health bodies who will pass on the communication to the LRF Partnership Team for onward circulation to all other Category 1 & 2 responders.

### Notification Arrangements

Dependant upon its nature and degree, Public Health Wales will communicate the change in Pandemic phase using a variety of methods. These will include email, telephone, fax and SMS messages.

#### Response Organisations



**Figure 3 Response Organisations**

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## 12. Strategic Co-ordination Group (Gold) - Membership

Once it has been determined that the Strategic Co-ordination Group needs to convene the Police, who will normally chair the meetings, will issue an early warning to all of the partner agencies. The early warning will be given as early as possible.

The requirement for strategic management may not apply to all responding agencies owing to differing levels of engagement, but in a pandemic the Strategic Co-ordination Group will probably consist of representatives of all agencies within the LRF membership.

It may be appropriate for an agency not involved at strategic level nevertheless to send liaison officers to meetings of the SCG. Dyfed-Powys Police will normally chair the Strategic Co-ordination Group and will co-ordinate attendance at Group meetings to be held at Police Headquarters, Carmarthen. Notification will follow the SCC/SCG activation protocol. Agencies to be notified and other organisations to be considered to attend SCG meetings are shown below:

SCG Responder	SCG Responder (for consideration)
Dyfed Powys Police	Milford Haven Port Authority
Mid & West Wales Fire & Rescue Service	Animal Health & Veterinary Laboratory Agency
Welsh Ambulance Services NHS Trust	Welsh Water/Dwr Cymru
Hywel Dda Health Board	Severn Trent Water
Powys teaching Health Board	SWALEC
Natural Resources Wales	Western Power
Pembrokeshire County Council	Scottish Power
Carmarthenshire County Council	Wales & The West Utilities
Ceredigion County Council	BT
Powys County Council	Health & Safety Executive
Maritime & Coastguard Agency	North & South Wales Trunk Roads Agencies
British Transport Police	Met Office
Welsh Government	Network Rail
Public Health Wales	Arriva Trains Wales
	First Great Western
	British Red Cross
	St. John Cymru – Wales
	Armed Forces
	COMAH Sites
	Ferry Operators
	Mainland Pipeline Ltd

**Table 7 – Representatives forming Strategic Co-Ordination Group**

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**Multi-Agency Tactical Co-ordination Group (Silver) – Membership may include Senior Representatives from:**

Powys teaching Health Board
Public Health Wales
Hywel Dda Health Board
Welsh Ambulance Services NHS Trust
Local Authority
Dyfed-Powys Police
Maritime & Coastguard Agency
Mid & West Wales FRS
Natural Resources Wales
Milford Haven Port Authority
Funeral Directors (as required)
Voluntary Sector
Media / Communications Rep(s)
British Red Cross

***Table 8 – Representatives forming Multi-Agency Co-Ordination Group***

## **PART 4 – ROLES AND RESPONSIBILITIES**

### **14. Public Health Wales**

PHW, will:

#### **Planning Stage:**

- Maintain, develop and test epidemiological and laboratory pandemic reporting and collection systems
- Ensure there is a rolling plan of assay development and updating as required, reflecting ability to detect current and potential influenza epidemic strains, linked to assay roll out and quality assurance, including planning for sample transport links to laboratory(s)
- Maintain Communications planning
- Ensure up to date generic guidance on the investigation and management of cases and outbreaks is available
- Ensure generic information on influenza is available to the general public and health professionals

#### **Detect/Assess Stage:**

- Activate pandemic flu plans
- Ensure consistent, accurate and timely public health advice is available to responding organisations, the media and public
- Implement enhanced pandemic influenza surveillance including systems to measure community transmission and severe disease and link with HSC Board
- Adapt and roll out guidance on the investigation of possible cases and their contacts, clusters and outbreaks
- Liaise with UK health protection organisations
- Identify newly emerged vulnerable groups and the ways they are affected to inform prevention, control and treatment and provide support where possible

#### **Treat/Escalate Stage:**

- Provide management of the public health response
- Continue to engage with DH&SS/WG, Wales NHS and multi-agency response structures
- Support arrangements to continue to characterise viral isolates in order to detect any changes that may affect virulence, antiviral resistance, transmission or any other characteristic (RVL)
- Carry out expected increase in testing of samples (RVL)
- Distribute antiviral medicines to children in special schools if required
- Maintain surveillance systems of ILI cases and outbreak investigation
- Undertake community surveillance, sero-incidence surveillance and severe disease (hospital-based) and mortality surveillance
- Measure and monitor the uptake, safety, and effectiveness of any pandemic influenza vaccination programme

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- Provide timely and accurate information for the public and health professionals on the pandemic and the clinical effects of the infection
- Adapt guidance on the management of cases and their contacts in light of emerging information on the virus, the clinical illness and the impact on society and services
- Provide advice on when to cease measures to slow transmission of the virus, if they have been commenced

### Recovery Stage:

- Continue to monitor the virus and susceptibility in the population
- Review response activities and identify lessons learned for possible and subsequent waves/ other large-scale emergencies
- Issue regular communication to internal/external stakeholders
- Continue to produce/ contribute to status reports as needed

## 15. Health Boards

Health Boards will:

### Planning Stage:

- Governance of NHS pandemic preparedness
- Ensure business continuity, surge, winter and pandemic flu plans are up to date and reflect latest guidance/ science
- Undertake regular training and exercising
- Engage with independent and voluntary sector re mutual aid
- Maintain lists of staff contact details
- Maintain lists of vulnerable patients/clients
- Maintain robust seasonal flu vaccination programmes for staff and patients
- Participate in Multi-agency preparedness
- Participate in relevant assurance processes
- Review anticipated impact of staff absence on all ancillary services: laundry, cleaning, portering, security etc
- Identify potential Antiviral Collection Points (ACPs) locations
- Management of primary care planning
- Collaboration and engagement in Social care planning
- Ensure pandemic flu plans have been communicated to all staff
- Agree and exercise command and control arrangements
- Ensure arrangements are in place for storing and distributing PPE

### Detect/Assess stage:

- Activate pandemic flu plans
- Engage in the DH&SS pandemic response network
- Provide SITREP information to DH&SS
- Review requirements for pandemic flu specific Local Enhanced Services/ Direct Enhanced Services provision

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- Identify and collate vulnerable persons list ensuring process in place to keep this up to date as the situation unfolds
- Communication with staff and public
- Swabbing and sampling of patients
- Isolate patients to slow spread
- Prepare to commence storage and distribution of antivirals and PPE
- Develop specific laboratory diagnostic testing (RVL)
- Ensure arrangements are in place for sending influenza strains for typing (Regional Virus Laboratory))
- Confirm and set up ACP locations in pharmacies/premises if required
- Refresh retired GP list
- Commission vaccination programme, including cover for travellers/ homeless/ rough sleepers
- Identify the impact on community support mechanisms and collaborate with key stakeholders within the community to reduce impacts
- Prepare to commence local distribution of countermeasures

#### **Treat/Escalate stage:**

- Governance of local response
- Provide information to DHSS to support “sitrep”
- Engage with Community pharmacies to assist response
- Activate ACPs (if NPFS activated)
- Maintain support to community patients
- Provide information and oversee vaccination campaign
- Death declaration and certification
- Cohort patients if necessary
- Reduce minor impact services that will not put lives at risk
- Maintain core services
- Oversee local PPE storage, stock management and distribution
- Commission additional NHS capacity (e.g. ECMO/ICU capacity) if required
- Consider enacting any agreements with independent sector providers to support NHS
- Discharge patients into the community where safe to do so

#### **Recovery stage:**

- Complete vaccination programme
- Consider rest and emotional support for staff
- Identify lessons learned
- Agree prioritisation of return of services
- Continue to communicate with all partners
- Maintain seasonal flu vaccination campaign
- Review response activities and identify lessons learned for possible and subsequent waves/ other large-scale emergencies
- Continue to produce/ contribute to status reports as needed
- Review previously identified vulnerable groups a Identify lessons learned

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- Contribute to replenishment programme
- Undertake Stock take
- Staff welfare

## 16. Welsh Ambulance Services NHS Trust

The Welsh Ambulance Services NHS Trust will:

### Planning Stage:

- Governance of WAST pandemic preparedness
- Ensure business continuity, surge, winter and pandemic flu plans are up to date and reflect latest guidance/ science
- Undertake regular training and exercising

### Detect/Assess stage:

- Activate pandemic flu plans
- Review business continuity plans
- Prepare to commence distribution of PPE to staff
- Engage in DH&SS and multi-agency response structures

### Treat/Escalate stage:

- Implement business continuity/pandemic flu plans
- Engage with DH&SS /WG , Wales NHS and multi-agency response structures
- Manage PPE distribution to staff

### Recovery stage:

- Review response activities and identify lessons learned for possible and subsequent waves/ other large-scale emergencies
- Staff welfare
- Return to normal services

## 17. NHS Direct Wales

NHS Direct Wales will:

- Have arrangements, in consultation with partner agencies, to respond to a flu pandemic.
- In consultation with NHS Direct (England) and PHW, develop and maintain protocols and templates for use in a flu pandemic.
- Implement use of pre prepared messages and follow agreed management protocols for patients, giving locally appropriate guidance.

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- d. Provide feedback to Health Boards, PHW and the Welsh Government on information needed to meet requirements of the public.
- e. Have arrangements, to manage increased staff absenteeism and maintain essential services.

## 18. HM Coroner

HM Coroner will, where able:

- a. Have arrangements, in consultation with partner agencies, to respond to a flu pandemic
- b. Assist the multi-agency response across the LRF by participating in the Strategic Co-ordination Group at Police Headquarters, Carmarthen.
- c. Assist and advise for any measures required to accommodate excess deaths, temporary body holding and funeral arrangements.
- d. Have in place robust Business Continuity Plans which consider the impact of a pandemic and potential staff absenteeism.

## 19. Welsh Blood Service

Welsh Blood Service will:

### Planning Stage:

- Ensure business continuity, surge, winter and pandemic flu plans are up to date and reflect latest guidance/ science
- Undertake regular training and exercising

### Detect/Assess stage:

- Review business continuity plans
- Review blood shortage plans

### Treat/Escalate stage:

- Implement business continuity/pandemic flu plans
- Liaison with Health Boards on blood supplies
- Undertake appropriate media campaign for donors not being treated for flu
- Liaise with UK Blood Services on mutual aid arrangements

### Recovery stage:

- Staff Welfare
- Replenish Blood stocks
- Ongoing media campaign

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## 20. Dyfed-Powys Police

The intention of Dyfed-Powys Police during an Influenza Pandemic or other Pandemic influenza Emergency is:

- To assist the Welsh Government [WG], Department of Health, Public Health Wales, National Health Service organisations and partner agencies in their response to an Influenza Pandemic or other Pandemic influenza Emergency through the Local Resilience Forum area.
- To assist in co-ordinating the multi-agency response.
- To Chair the Strategic Co-ordination Group at Police Headquarters.
- To nominate a senior officer who will attend the multi-agency Co-ordination Group (Silver).
- To have in place robust Business Continuity Plans which consider the impact of a pandemic and potential staff absenteeism.
- To provide assistance and advice to agencies in identifying vulnerable groups.
- To enforce any legislation that is already in being or imposed for the duration of the outbreak i.e. Statutory Instruments.

### Dyfed-Powys Police will, where able:

- a. Assist with the saving of life in conjunction with the other Emergency Services.
- b. Respond with available resources should it become necessary to isolate specific areas.
- c. Protect property.
- d. Co-ordinate the Media response to the outbreak/pandemic through the Warning & Informing Group or multi-agency media cell (if set-up).

### Dyfed-Powys Police where necessary will undertake the tasks below:

- Identify the deceased on behalf of H.M Coroner.
- Assist with the restoration to normality at the earliest opportunity.

## 21. Local Authorities

Local Authorities will, where able:

- a. Participate in outbreak control arrangements
- b. Be a source of timely legal advice in relation to the Health Protection (Wales) Regulations 2010, as appropriate
- c. CEO or representative will attend the Strategic Co-Ordination Group held at Police Headquarters, Carmarthen.
- d. A senior representative will attend the multi-agency Co-ordination Group (Silver).
- e. Have in place robust Business Continuity Plans which consider the impact of a pandemic and potential staff absenteeism.
- f. Through Registrars collate details for returns on the impacts of cremation & burial services.

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- g. Through Emergency Planning Units collate and submit details for returns on essential services, ad hoc issues, schools, early years, childcare, staffing and other issues.
- h. Provide assistance and advice to agencies in identifying vulnerable groups.
- i. Provide premises to support the public health management of the outbreak e.g. vaccination centres. Discussions will need to take place in advance of any provision which will include handover and return arrangements and the feasibility of providing care taking staff with knowledge of the facilities in the centre. Cost issues will need to be agreed in advance.
- j. Provide social services support.
- k. Jointly support provision of public information/advice.
- l. With the approval of the Coroner, establish body holding facilities if needed.
- m. Address issues relating to increased pressure on registration/ burial/cremation services.
- n. Provide environmental health services.
- o. Provide Animal Health services and advice, in consultation with the Animal Health Agency.

## **22. Mid and West Wales Fire & Rescue Service**

Mid & West Wales Fire & Rescue Service will, where able:

- a. Ensure where possible, that the Senior Principal Operations Officer attends the Strategic Co-Ordination Group at Police Headquarters, Carmarthen.
- b. Ensure where possible, that a Tier Two (Tactical) Officer attends the Tactical Co-ordination Group in each county.
- c. Have in place robust Business Continuity Plans which consider the impact of a pandemic and potential staff absenteeism.
- d. Provide assistance and advice to agencies in identifying locations where known vulnerable groups may be found.

## **23. Pembrokeshire County Council's Port Health Team**

Pembrokeshire County Council's Port Health Team will, where able:

- a. Have arrangements, in consultation with partner agencies, to respond to a flu pandemic
- b. Implement public health measures within the port area
- c. Have arrangements to manage increased staff absenteeism and maintain essential services.
- d. Participate in outbreak control measures.
- e. Be a source of timely legal advice in relationship to the Public Health (Control of Disease) Act 1984 (as amended), International Health Regulations, Health Protection (Wales) Regulations and Public Health Ships and Aircraft Regulations as appropriate
- f. Support provision of public information / advice

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- g. Provide port health services
- h. Provide other assistance as agreed with other agencies
- i. Attend the Multi-Agency Co-ordination Group at Mid & West Wales Fire Command, Haverfordwest, if required.

## 24. Milford Haven Port Authority

Milford Haven Port Authority will, where able:

- a. Assist with the multi-agency response by sending an official to the Multi-Agency Co-ordination Group (Tactical Command) at Haverfordwest Fire Command.
- b. Have in place robust Business Continuity Plans which consider the impact of a pandemic and potential staff absenteeism.
- c. Provide assistance and advice to agencies in identifying vulnerable groups.
- d. Provide assistance in measures to prevent the spread of infection from vessels visiting the port of Milford Haven.

## 25. Natural Resources Wales

Natural Resources Wales will, where able:

- a. Have arrangements, in consultation with partner agencies, to respond to a flu pandemic.
- b. Assist the multi-agency response across the LRF by participating in the Strategic Co-ordination Group at Police Headquarters, Carmarthen.
- c. Activate Natural Resources Wales' preferred waste disposal hierarchy in the event that clinical waste disposal capacity is exceeded and alternative disposal methods need to be used.
- d. Provide advice to professional partners on the environmental impacts arising from temporary holding areas or burial or cremation of increased numbers of deceased during a pandemic.
- e. Assist Local Authorities in identifying suitable sites for new cemeteries or mass burial sites, so that any risks to water quality are considered before decisions are taken.
- f. Formulate regulatory positions, where appropriate, which detail our policy level response to a pandemic including for example our regulation of incinerators, waste management facilities and sewage treatment works.
- g. Identify clinical waste storage and treatment capacity – including how much spare capacity exists within NHS and private incinerators.
- h. Identify alternative disposal sites for clinical waste.
- i. Develop a generic overarching set of principles and a hierarchy for disposal of clinical waste including Secretary of State/WAG powers of direction.
- j. Through attending the Multi-Agency Co-ordination Group (Silver), provide advice to professional partners of consequences of the pandemic:

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- Environmental fate and ecotoxicological impacts of disinfectants;
- Environmental survival and transport of flu viruses;
- Efficacy of Sewage Treatment Works in dealing with flu virus;
- Impact of Tamiflu on environment/ Sewage Treatment Works processes;
- Disposal options for clinical waste e.g. is rendering feasible for some clinical waste.

k. Have in place robust Business Continuity Plans which consider the impact of a pandemic and potential staff absenteeism.

## 26. British Red Cross

The British Red Cross will, where able:

- a. In the event of a Flu pandemic, set up a 24/7 operational centre to coordinate the response of volunteers both locally and nationally to respond to a flu pandemic. Normal call-out procedures would be utilised to achieve this.
- b. Coordinate, log and register members of other voluntary agencies or general public who have come forward to support the flu effort.
- c. If, given the time scale involved, it becomes impractical to verify and/or carry out a new CRB check on new volunteers, due cognisance would be taken of this and Category 1 responders would be informed if it became necessary to utilise such volunteers.

## 27. Animal Health & Veterinary Laboratory Agency (AHVLA)

AHVLA will, where able:

- a. Have arrangements, in consultation with partner agencies, to respond to a flu pandemic
- b. Assist the multi-agency response across the LRF by participating in the Strategic Co-ordination Group at Police Headquarters, Carmarthen.
- c. Assist and advise for any measures required to assist with welfare of animals in the LRF area.
- d. Provide assistance and advice to agencies in identifying premises where animals are left vulnerable due to sickness of owner(s).
- e. Provide assistance and advice to agencies in identifying vulnerable groups.
- f. Provide Animal Health advice and assistance in consultation with Local Authority Animal Health officers where available.
- g. Have in place robust Business Continuity Plans which consider the impact of a pandemic and potential staff absenteeism.

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## **28. Maritime & Coastguard Agency**

The Maritime & Coastguard Agency will, where able:

- a. Assist with the multi-agency response by sending a senior official to the Strategic Co-Ordination Group at Police Headquarters, Carmarthen.
- b. Assist with the multi-agency response by sending an official to the multi-agency Co-Ordination Group (Silver).
- c. Provide assistance and advice to agencies in identifying vulnerable groups.
- d. Provide assistance in measures to prevent the spread of infection from vessels visiting the coast of the LRF area
- e. Have in place robust Business Continuity Plans which consider the impact of a pandemic and potential staff absenteeism.

## **29. Dyfed-Powys LRF Partnership Team**

Dyfed-Powys LRF Partnership Team will, where able:

- a. Disseminate to relevant partners any circulars and information received from the Cabinet Office, Welsh Assembly, PHW, or Dyfed-Powys SCG.
- b. Collate Daily Situation Reports received from each Multi-Agency Co-ordination Centre to submit to Dyfed-Powys SCG.
- c. Submit the agreed combined Daily Situation report from the Dyfed-Powys SCG to the Welsh Assembly.
- d. Have in place robust Business Continuity Plans which consider the impact of a pandemic and potential staff absenteeism.

## **PART 5 – ANTI-VIRALS and VACCINES**

### **30. Anti-Viral Medication**

When taken, ideally within 2 days of the onset of symptoms, anti-viral medication can reduce the length, and severity of symptoms. Clinical trials have shown that the earlier treatment can be started the greater the likely degree of benefit. Therefore, commencement of anti-viral medication is recommended as soon as possible.

Health Boards and GP's will be guided by the Chief Medical Officer regarding prescription of anti-viral medicines. Normally, prescription of anti-virals is restricted to those patients in "high-risk" groups. However, consideration is currently being given to extending this to patients who are not in a "high-risk" group, but who may be at risk to developing serious complications from influenza.

In the early stages of a Pandemic, Health Boards will receive anti-viral stocks from the Welsh Government. The Health Board will distribute stocks across community and hospital pharmacies, which will support the primary care management approach to the pandemic.

If primary care becomes over pressured and unable to cope with demand, and support measures to assist are also over burdened, then the Welsh Government has the ability to activate the National Pandemic Flu Service as a contingency measure.

### **31. Anti-virals for children under one year old**

Children aged under one year cannot have anti-virals in the standard tablet form. They will need to be seen and assessed by a GP or suitably qualified health professional/practitioner.

Given that GP surgeries are likely to be infectious environments and children under one are particularly vulnerable, GPs may decide to visit the child at home, assess their symptoms and, if necessary, arrange access to the antiviral paediatric suspension (via the hospital pharmacy).

Where a child under one is not registered with a GP (e.g. a child of foreign travellers) the parent/carer may decide to bring their child into a GP surgery. In this case, the patient can be registered as a temporary resident and treated accordingly.

### **32. Anti-virals for children over one year old**

Children over one year old will be assessed and referred for anti-virals if required.. The antiviral dosage will vary from 30mg to the adult dose of 75mg, dependant upon the child's age and bodyweight.

### **33. National Pandemic Flu Service**

The National Pandemic Flu Service has been designed to support the response provided by Health Boards and Primary Care and can provide a route for large numbers (of non-complex patients) to be assessed. Symptomatic individuals will receive advice, obtain authorisation for anti-virals and receive information on collection points. The National Pandemic Flu Service will be accessible by telephone or via the internet.

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The process will be as follows:

- a. The individual's identity will be validated using their NHS number. Those registered for health services in Scotland or Northern Ireland will use their local equivalent health identifiers.
- b. The Individual will be taken through a clinical protocol and assessed to determine eligibility for anti-virals. If any complex medical issues are identified the patient will be referred to their G.P.
- c. If anti-virals are authorised, the individual will be given a unique reference number (URN) to be used at a collection point and advised of their nearest collection point.
- d. Symptomatic individuals should then ask a flu friend to arrange collection of anti-virals on their behalf from a convenient collection point. If Local Anti-viral Collection points are not in operation, or the individual has difficulty in appointing a Flu Friend, the HB will assist, where possible, in arranging delivery of anti-virals to the individual's home.

### 34. Antiviral Distribution Measures

Stocks of antiviral medicines will be distributed to each HB area and distributed across community & hospital pharmacies as required. If the pressure on primary care warrants the activation of the National Pandemic Flu Service, then Anti-Viral Collection Points will also be stocked.

Initially, infection levels in the LRF area are not likely to justify fully staffing all identified centres. It will prove more efficient to adopt a phased approach to opening centres to mirror daily demand. In the initial stages it may be more efficient to make a delivery service available.

However, if the National Pandemic Flu Service has been activated, at least one Collection Point must be available within each HB area, as the Flu Service will require a Collection Point to be available to refer the caller to. Having a single collection point available in each county may prove inconvenient for many callers and for this reason local media should be used to publicise the availability of a delivery service until such time as more Collection Points are opened. A delivery capability should be retained throughout a pandemic to maintain a service to those who are unable to nominate Flu Friends to access Collection Points.

After the pandemic attack rate has peaked, the number of Collection points may be reduced in line with falling infection levels.

### 35. Collection Point requirements & functions

Collection points are nominated locations where Flu Friends can collect anti-virals on behalf of a symptomatic person, on presentation of the person's valid URN. A map of the locations for Antiviral Collection Points across the LRF area is seen below.

Anti-Viral Collection Point Centre specifications and operational guidelines are detailed in specific Welsh Government guidance.

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## **36. Hospitals, Care Homes & Closed Communities**

### **a) Hospitals**

During a pandemic, hospitals will see a significant increase in demand for services.

- Hospitals will be expected to supply anti-virals (including the anti-viral solution for children aged under one year) to symptomatic in-patients and, where appropriate, to out-patients
- Hospitals will not be expected to issue anti-virals to individuals with flu symptoms (and no apparent complications). These individuals will be referred to the National Pandemic Flu Service
- Hospitals will be required to provide a facility for secure storage of anti-virals for in hospital use.

### **b) Care homes with 15 or fewer residents**

In the case of smaller care homes, if a resident displays flu symptoms a member of staff should contact the National Pandemic Flu Service and go through the standard process as appropriate. Staff should then take the URN to a collection point and get the anti-viral on the resident's behalf. If a resident is displaying complications then a GP should be contacted.

### **c) Care homes with more than 15 residents**

It might not be feasible for larger care homes to go through the standard National Pandemic Flu Service process for every symptomatic resident, particularly if a large number of residents are affected. In these cases, healthcare professionals could use Flu Line Professional to authorise anti-virals. The HBs may make arrangements to deliver anti-virals and manage the stock count. The HBs will record the NHS numbers of the residents issued anti-virals using Flu Line Professional.

### **d) Closed Communities**

Provision for closed communities where the attack rate is likely to be much higher has been considered. There are no prison institutions in Dyfed-Powys. There are two large boarding schools in Brecon and Llandovery and Universities - Aberystwyth and Trinity St. David (which has campus's in Lampeter & Carmarthen), and Netherwood – an independent school in Saundersfoot. There are large military establishments in Powys and Pembrokeshire which will receive an advance supply of anti-virals. Staff in these establishments will still contact the National Flu Service to be triaged and receive their URN. The anti-virals will then be issued from the base, which will maintain a record of the URN.



### 37. Location of Antiviral Collection Points



*figure 6 - Location of Antiviral Collection Points*

The map above outlines the locations of the pre-identified Antiviral Collection Points throughout the LRF area. It does not include collection points identified in neighbouring areas or those that may be set up in response to a particular requirement in an identified “hot-spot”. All these pre-identified collection points have been assessed and meet the following requirements:

- Secure building with lockable storage area
- Parking and delivery access for a 17.5 tonne lorry
- Separate entrance and exit and space for queues in times of high demand
- Disability access
- Two computers with broadband connection (preferably PSBA)
- Two telephones, a fax and printer

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### **38. Vaccination Arrangements**

The UK has limited stocks of seasonal flu vaccine purchased specifically for the protection of healthcare workers. PHW, Powys teaching Health Board and Hywel Dda Health Board occupational health leads should provide the professional lead in planning for, and ensuring the delivery of, immunisation of those NHS staff groups for whom they are responsible. The leads will be responsible for providing the necessary vaccine, overseeing the suitability and completeness of local arrangements, and ensuring monitoring of vaccine coverage among healthcare workers. SCGs should support these arrangements, as required.

### **39. Pandemic-specific vaccine**

Vaccine specific to the influenza pandemic can only start to be manufactured once the pandemic viral strain has been isolated. It is expected that initial supplies of vaccine will not be available until after the first pandemic wave. It may be four to six months from the emergence and establishment of the new virus before a population-wide vaccination campaign can commence.

Responsibility for the choice of priority groups lies at national level and would take into consideration including ethical concerns as well as scientific factors, such as the incidence and risk of clinically severe disease in different population groups, and the possible impact on slowing the spread of disease by prioritising particular population groups.

Given that specific pandemic vaccine can be provided by manufacturers only at a limited rate, that it will be provided in relatively space-saving multi-dose vials and that it should be used promptly, it is less likely that a specific pandemic vaccine will cause major distribution or storage problems nationally or locally.

### **40. Delivery of pandemic specific vaccine**

Powys teaching and Hywel Dda Health Boards have overall responsibility for the protection of public health within the Dyfed-Powys LRF area and are responsible for planning the response to an influenza pandemic in that area, including the delivery of vaccination. Both HBs have a responsibility to plan for situations where it would be necessary to deliver treatment to large numbers of patients as quickly as possible.

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## PART 6 – MANAGING EXCESS DEATHS

During a pandemic, the number of excess deaths (those over and above those which could normally be expected) could cause additional pressures, affecting the capacity to deal with various aspects of the process including:

- Medical practitioners
- Coroners
- Registrars
- Funeral Directors
- Cremation Services
- Burial Services
- Coffin / body bag supply
- Body transport and storage

In dealing with excess deaths, the overarching principles of the Dyfed-Powys Mass Fatality Plan will be adhered to:

They are:

- The provision of honest and, as far as possible, accurate information at all times and at every stage
- Respect for the deceased and the bereaved
- A sympathetic and caring approach throughout; and
- The avoidance of mistaken identity.

In addition, the response provided will need to:

- Prioritise care for the living over the management of the deceased, and
- Be mindful of the needs and concerns of the bereaved and to ensure adequate provision is made for practical and emotional support.

### 41. Planning Assumptions for Excess Fatalities

The UK planning assumptions advise that plans should be made to accommodate various scenarios in terms of proportion of the population affected and from them the fatality rate.

A lower case scenario of an attack rate of 25% and a case fatality rate of 0.4%. This may result in approximately 515 additional deaths across Dyfed-Powys.

A mid case scenario - a clinical attack rate of 35% and a case fatality rate of 1.5% may see around 2,703 additional deaths across Dyfed-Powys.

A worst case scenario - a clinical attack rate of 50% and a case fatality rate of 2.5% would result in approximately 6,434 additional deaths across Dyfed-Powys. Almost 43% (2767) of these would occur during weeks 6 & 7.

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## 42. Normal Operating Capacities

There is a general acceptance that cremation capacity can be increased by operating 24/7 during the crisis. Some crematoria operators believe that keeping furnaces up to temperature would reduce wear and tear caused by the strains of heating and cooling furnaces. There are three crematoria in Dyfed-Powys - Aberystwyth and Llanelli have single burners, whilst Narberth has two. Studies have shown that operating at full capacity each burner could be expected to carry out up to 25 cremations per day, a total of 100 for the LRF area. Each Local Authority would need to consider how it would sustain staffing levels there would be a need to reassign and train local authority staff in the lead up to a pandemic.

A limiting factor for the operation of crematoria is compliance with air quality regulations. DEFRA have indicated that these rules would be relaxed for the duration of a pandemic to assist with expanding cremation capabilities.

At the highest predicted infection and death rates, for the peak two weeks of a pandemic, cremation capacity would only be 50% of the death rate. To cope with the excess numbers, there needs to be an increase in capacity for burial and body storage capacity.

Unlike crematoria, burial capacity is not finite. In 2007 by the Ministry of Justice carried out a survey of burial grounds in England and Wales. Of an estimated 2,250 burial grounds in Wales, 225 are overseen by local authorities. The bulk of the rest are churches and chapels. Taking the population of Dyfed-Powys as a proportion of the whole of Wales (17%), we have approximately 380 burial sites in our area.

## 43. Likely Pressure Points

**Funeral Directors:** Whilst there is an apparent capacity to massively increase burial capacity, a major limiting factor will be the small number of undertakers available to carry out funeral services. Most already have mutual aid agreements which would be activated in an emergency.

Engagement with funeral directors suggests that in an emergency their time could be maximised by collecting bodies into their premises out of hours. They are best placed to work with the clergy in dealing with bereaved families and would be keen to assist in persuading relatives not to hold a funeral service at the time. This would assist in infection control and free up time for the increased workload. Most families would expect to hold memorial services after the pandemic has passed.

**Body Transport:** Funeral directors locally have indicated that they should be able to resource vehicles and drivers for body transport without the need for outside assistance. They would require that hospitals have dedicated staff available out of hours for bodies to be collected. Should fuel shortages become an issue, funeral services will need to receive priority supplies in order to maintain services.

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**Mortuaries:** A survey carried out in 2013 resulted in the following capacity figures for hospital mortuaries:

	Total Capacity
Carmarthenshire	53
Ceredigion	20
Pembrokeshire	31
Powys	43

*Hospital Mortuary Capacity within Dyfed-Powys*

Funeral Directors have capacity to source or create chilled storage to accommodate many times the storage available in mortuaries. Bodies can be kept in body bags inside coffins and could be stored for up to 21 days before public health issues arise. Provided all barriers to quick processing of paperwork are removed, the storage of bodies, even at the peak of the worst case scenario would cease to be an issue.

Should storage arrangements be overwhelmed, the local authorities have a contract in place with Blake Emergency Services to provide chilled storage facilities in each county. These facilities would probably occupy sites previously identified (see Dyfed Powys LRF Mass Fatalities Plan).

**Coffin Supply:** Local studies suggest that large undertaking practices normally carry a stock of around 50 coffins and 100 body bags. Standard lead time from coffin order to delivery is two weeks and extra stock can be ordered in during the lead up to a pandemic, but with extra demand nationwide the supply of coffins would soon become an issue. There are only a limited number of manufacturers in the UK and it is estimated that capacity would be outstripped by week 4 of a worst case pandemic, leading to a national shortage and likely profiteering. Suggestions to overcome coffin shortage include recycling following the funeral service, with cardboard coffins being used for transport to crematoria or burial grounds.

**Finances:** Discussions with funeral directors indicate that a major factor restricting their ability to increase capacity would be cash flow. Funerals are usually paid after the event, often after probate issues have been settled. In a pandemic probate issues may well be suspended, cutting off a funding stream. Undertakers have to pay substantial costs up front for both burial and cremation. A firm able to significantly increase in funerals, to say 10 per day would incur up-front costs of several thousand pounds per day, causing cash flow difficulties in a very short time. It has been suggested that local authorities or government introduce a voucher type scheme, guaranteeing the immediate costs pending recovery by normal channels.



## APPENDICES

### Appendix 1: National Guidance and Relevant References

Health & Safety at Work Act 1974 (& supporting Regulations)

Health Protection (Wales) Regulations 2010

International Health Regulations

Public Health Ships Regulations

Cabinet Office statutory guidance *"Emergency Preparedness"*

Cabinet Office non-statutory guidance *"Emergency Response and Recovery"*

The *"Pan Wales Response Plan"*

The *"Wales Framework for Managing Pandemic influenza Emergencies"*

*The UK Influenza Pandemic Preparedness Strategy 2011*

The *"UK Influenza Pandemic Contingency Plan"*

Wales Health & Social Care Influenza Pandemic Preparedness & Response Guidance 2013

Cabinet Office Preparing for Pandemic Influenza: Guidance for Local Planners 2013

Wales NHS Guidance: *"Beyond a Major Incident"*

A National Framework for Responding to an Influenza Pandemic

Home Office: *Guidance for Planners Preparing to Manage Excess Deaths*

Department for Children, Schools and Families *Guidance to help schools and families*

Cabinet Office: *Business Continuity Guidance*

Health Board & Public Health Wales Pandemic flu plans

Cabinet Office: *Data Protection and Sharing – Guidance for Emergency Planners and Responders*

Cabinet Office: *Identifying people who are vulnerable in a crisis*

Identity & Passport Service – *Planning for a possible influenza pandemic*

## Appendix 2: Glossary of Terms

AHVLA	Animal Health & Veterinary Laboratory Agency
CCC	Civil Contingencies Committee
COBR	Cabinet Office Briefing Room
DH	Department of Health (England)
ECCW	Emergency Co-ordination Centre (Wales)
GP	General Practitioner
HPA	Health Protection Agency
HSCD	Health & Social Care Department (Wales)
HB	Health Board
LRF	Local Resilience Forum
NEMA	National Emergency Mortuary Arrangements
NHS	National Health Service
OCMO	Office of Chief Medical Officer (Wales)
PHW	Public Health Wales
SCG	Strategic Co-ordinating Group
STAC	Scientific & Technical Advice Cell
UKNIPC	United Kingdom National Influenza Pandemic Committee
URN	Unique Reference Number
WG	Welsh Government
WAST	Welsh Ambulance Services NHS Trust
WHO	World Health Organisation
WRF	Wales Resilience Forum



### Appendix 3: LRF Pandemic Planning Group

These arrangements have been developed by the Dyfed-Powys Pandemic Influenza Task Group on behalf of the Dyfed-Powys Local Resilience Forum. The Group consists of representatives from the following agencies:

British Red Cross  
Dyfed-Powys Police  
Dyfed-Powys LRF Partnership Team  
Natural Resources Wales  
Hywel Dda Health Board  
Pembrokeshire County Council  
Powys teaching Health Board  
Local Authorities – Carmarthenshire; Ceredigion,  
Pembrokeshire & Powys  
Mid & West Wales Fire and Rescue Service  
Public Health Wales  
Welsh Ambulance Services NHS Trust

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Document produced by Dyfed Powys LRF Health Emergency Planning Co-ordination Group.