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The Government's response to the House of Lords Science and Technology Committee's Fourth Report of Session 2005-06 on Pandemic Influenza

Presented to Parliament by
the Secretary of State for Health
by Command of Her Majesty
16 February 2006

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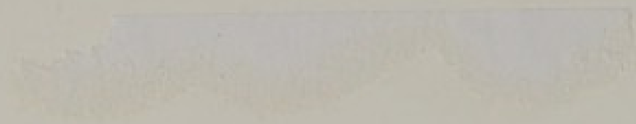

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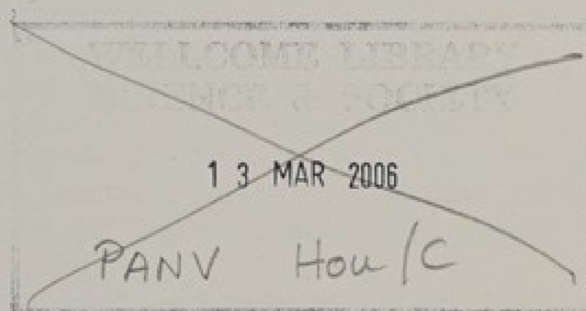

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The Government's response to the House of Lords Science and Technology Committee's Fourth Report of Session 2005-06 on Pandemic Influenza

Introduction

This Command Paper sets out the Government's response to the House of Lords Science and Technology Committee's fourth report of Session 2005-06, on pandemic influenza.

The Government regards planning to combat an influenza pandemic as one of its top emergency planning priorities. To drive planning forward and ensure effective cross-government co-ordination, a Cabinet Committee on Influenza Pandemic Planning (MISC32) has been created, and the Secretary of State for Health has been designated as the lead Government Minister. Planning for a Cabinet Committee specifically on pandemic influenza was initiated in October 2005 and the Committee was formally announced in early December 2005. As the Science and Technology Committee recognises, it may not be possible to prevent a pandemic occurring, but with good planning and preparation we can reduce its impact on the health of our population and consequently minimise the disruption to normal life and essential services. To that end, a considerable amount of work has been going on across central and local government and the NHS to prepare for a pandemic.

Areas of cross-government work include: contingency planning in local government, preparedness in critical national industries and the private sector, and the provision of advice to British nationals abroad. As part of the on-going Capabilities Programme across government, all Government Departments have been considering resilience in their key sectors, and considerable work has been undertaken to ensure that these plans are appropriate for an influenza pandemic. However, we are not being complacent and further work is under way to improve our preparedness because even the best prepared may be tested by the potential scale of an influenza pandemic.

The Department of Health published an extensively revised *UK Influenza Pandemic Contingency Plan* in March 2005, with an updated version subsequently being published in October 2005. The Department welcomes the Committee's assessment that the "plan is an excellent top-level account of the UK health service response to a pandemic". The plan is being backed up by practical action in respect of diagnostics, vaccines, treatments, the provision of information and improvement of NHS preparedness.

Since health is a devolved function, the devolved administrations are responsible for pandemic influenza preparedness within their borders. However, the *UK Influenza Pandemic Contingency Plan* is a UK-wide plan that was developed in co-operation with all of the devolved administrations. Department of Health officials are working closely with colleagues in the devolved administrations, and they are involved in all of the main contingency planning forums, including the UK National Influenza Pandemic Committee and the Department of Health's Scientific Advisory Committee.

Anti-viral drugs will provide the first medical intervention for pandemic influenza. A stockpile of 14.6 million treatment courses of the anti-viral drug oseltamivir (Tamiflu) is being procured, which will be complete by September 2006. The Department of Health has issued provisional clinical guidelines for patients with an influenza-like illness during a pandemic, which includes a section on the clinical features of the disease, to aid diagnosis. We also have a network of ten regional Health Protection Agency (HPA) laboratories who are competent in testing for the H5N1virus, which are supported by the national reference laboratory at the HPA's Centre for Infections.

There is no evidence that anti-viral drugs, including Tamiflu, will prove to be ineffective against avian or pandemic influenza. When used in countries where people have contracted avian influenza, Tamiflu has had an effect. Tamiflu was chosen for the UK stockpile on the basis of independent expert advice that reflected its efficacy and ease of administration. Internationally, it is still agreed to be the product of choice.

If a pandemic strikes before the anti-viral stockpile is complete, anti-virals will need to be prioritised, initially to healthcare workers and to those who fall into one of the 'clinical at risk' groups. Final decisions regarding prioritisation will be made on the basis of information emerging from the early stages of the pandemic about the virus and those groups most at risk. The UK National Influenza Pandemic Committee, chaired by Chief Medical Officer, will provide additional advice as required during the pandemic.

A specific vaccine would offer the best form of protection against pandemic influenza. However, a pandemic-specific vaccine cannot be manufactured until the exact influenza strain is known. As a consequence, it will take a minimum of around four to six months for the first stocks of vaccine to become available. The Government is actively engaged in discussions with international partners, the vaccine industry and regulatory bodies to ensure that a vaccine will be available as quickly as possible once the pandemic strain is known. We are also working with the National Institute for Biological Standards and Control (NIBSC) and others to see how to rationalise the testing process which ensures that a safe vaccine is produced.

Annex I of the *UK Influenza Pandemic Contingency Plan* contains a comprehensive Health Departments' communications strategy which aims to ensure that health professionals and the public are provided with consistent, clear and factually accurate information. When the plan was launched in March 2005, information was made available to General Practitioners (GPs) through the Chief Medical Officer's regular newsletter, and following the re-launch of the Plan in October 2005, all GPs were sent information packs that included technical information for them and information for the public. These resources are also freely available on the Department of Health's website, and provide clear information to explain the facts about pandemic influenza. The Cabinet Office has also co-ordinated a cross-government communications strategy which will ensure that Government Departments deliver consistent messages on pandemic influenza both before and during a pandemic.

NHS and social care organisations have also been making their own contingency plans for dealing with the practical consequences of a pandemic in terms of increased demand for services, possible shortages of supplies and staff absences. The Department of Health has been working with Strategic Health Authorities to ensure that these plans are in place across the country, and has procedures in place to ensure that plans are audited for assurance of their capability in planning for, and responding to, an influenza pandemic.

Infection control guidelines that provide valuable advice on reducing the risk of spread of the virus have been drawn up and issued to the NHS. Provisional clinical management guidelines have also been developed to help inform the management of patients who have pandemic influenza.

As part of their statutory duties, Primary Care Trusts (PCTs) have to ensure that arrangements are in place for the provision of primary care services in the event of influenza pandemic. All healthcare professionals will need to work flexibly to meet the needs of those that fall ill, and the Department of Health is working to ensure that they have the support they need. In order to meet the likely volume of work during a pandemic, PCTs should be discussing with their GPs the non-essential work that can be put on hold, and alternative care arrangements may need to be used in order to ensure that GP surgeries are able to cope. With Department of Health participation, the Royal College of General Practitioners and the British Medical Association have now set up a task group on influenza to provide guidance and increase the involvement of general practice in pandemic planning.

In conjunction with these preparations in the NHS, central Government is working closely with local authorities as well as essential and emergency services to ensure that their contingency plans for dealing with the consequences of a pandemic are in place. This includes dealing with the problem of higher levels of staff absence. In addition, operational guidance that was issued to the NHS in May 2005 emphasised the importance of NHS collaboration with local stakeholders, particularly local authorities, in order to ensure that planning is joined up across local communities. As a consequence, planning for an influenza pandemic is the top priority for local and regional resilience planners in the UK.

The testing of plans is a crucial part of preparedness planning, so the HPA has been funded to undertake pandemic influenza training exercises in various regions. These exercises provide not only an opportunity for health organisations to test their plans, but also to test their links with other key local organisations, including local authorities, the emergency services, utility companies and transport operators.

At the international level, the UK is working with international partners, including the European Union (EU) and the World Health Organization (WHO) to enhance global preparedness for an influenza pandemic and support vaccine development. In particular, the UK is at the forefront of international work in modelling and communications. In June 2005, we hosted an international modelling conference – the first of its kind on pandemic influenza.

As EU Presidency, the UK was instrumental in maintaining pandemic influenza at the centre of the EU health agenda. Two examples of recent EU activity include the publication of the European Commission's Preparedness and Response Plan, and 'Exercise Common Ground', an EU exercise on pandemic influenza in November 2005. Exercise Common Ground was considered to be extremely useful by those who took part. As well as being a useful international exercise, it provided a valuable opportunity to consider some of the key issues around our domestic preparedness in more detail.

The Government welcomes the Committee's recognition that the UK is among the best prepared countries in the world, but we are not complacent about this and acknowledge that more work needs to be done in order to make the country as fully prepared as possible to meet the threat. Yet even the best prepared countries may be tested by the potential scale of an influenza pandemic. The Committee's report was useful in highlighting the many uncertainties involved in planning for an influenza pandemic, including issues such as the exact benefits of the prophylactic use of anti-viral drugs in household settings (para 5.12), and the potential use of cell culture in vaccine production (para 7.4).

The Government has considered all the evidence presented to the Committee and these views, together with the conclusions and recommendations contained in the report, will be extremely valuable in informing our ongoing preparedness planning for an influenza pandemic.

The Government's Response to the Committee's Conclusions and Recommendations

1. We recommend that the Government review its support, financial and institutional, for the Food and Agriculture Organisation; we further urge the Government, in partnership with the European Commission and other European Union countries, to respond positively to the World Bank's establishment of a multi-donor trust fund to support investment in the region.

The Government recognises the special role of the Food and Agriculture Organisation (FAO) in the field of animal health and the Department for International Development (DfID) provided £14 million of core funding this financial year to support its work. But the FAO's effectiveness and capacity in many countries is limited, particularly on the ground. We therefore support a range of channels for delivering support programmes on avian influenza, drawing on FAO's expertise wherever appropriate. At the recent Beijing Conference, the Government pledged £20million, and the European Commission pledged $122 million for work in countries currently affected by, or at risk from, avian influenza. This money will be channelled primarily through multilateral agencies.

2. The Government should make every effort to ensure that the efforts of United Kingdom departments and agencies in both animal and human health are fully co-ordinated. We therefore recommend that the Government review the current rules governing funding of HPA activities overseas.

The Government completely agrees with the Committee on the importance of the activities of Government departments being fully co-ordinated, particularly in the provision of overseas assistance. Cross-government action on pandemic influenza, including the interface between animal and human health, is being co-ordinated through several channels, including the Cabinet Committee on Influenza Pandemic Planning (MISC32).

The Department of Health works closely with the Department for Environment, Food and Rural Affairs (Defra) on the animal health front. In particular, the Chief Medical Officer's team works closely with the Chief Veterinary Officer at both national and European level. There are generic arrangements in place between veterinarians and the HPA's health protection units at local level for managing any suspected outbreak of disease. The HPA is also heavily engaged in both the planning and front-line health protection work concerning the human health aspects of avian and pandemic influenza.

Meetings are regularly held between the Department of Health and Defra. For example, the Department of Health has representation on Defra's Animal Diseases Policy Group. With regard to central co-ordination of the response to avian influenza, should it occur in UK poultry flocks, or give rise to human cases, the Government is well prepared. Both Defra and the Department of Health have already sought advice from their expert advisory committees on the risks to human health and transmissibility of avian influenza from birds to people. The relevant committees have now developed links at working level.

There are no rules preventing the funding of HPA activities overseas. Indeed, the HPA already does such work, usually through UN agencies. These activities can be financed by DfID where these form part of projects agreed with national governments or international agencies and subject to normal procurement rules. This ensures that the UK response is well co-ordinated with those of other donors and international agencies.

The Government does not believe, as the Committee suggests, that this leads to a lack of co-ordination. The Government considers that the overall UK response needs to be fully co-ordinated with other international donors and agencies. Therefore, the Government plans to support the co-ordinated international response to the integrated influenza strategies of individual countries, as endorsed by the specialist UN agencies, through multilateral channels.

3. **We welcome the appointment of Dr David Nabarro as UN Senior System co-ordinator for Avian and Human Influenza. The performance of UN agencies, and the co-ordination between different agencies, has not always been optimal. We look to Dr Nabarro to ensure that the UN is well placed to co-ordinate international efforts to prevent the current epidemic of avian influenza turning into a full human pandemic.**

The Government welcomes the Committee's endorsement of Dr Nabarro as UN System Co-ordinator for Avian and Human Influenza, and will continue to support him in his role of increasing co-ordination between different UN agencies and encouraging better performance. We also support the UN as the most appropriate body to co-ordinate international efforts and to provide a global strategy to tackle avian influenza and the threat of a possible human influenza pandemic.

4. **Recent modelling by United Kingdom researchers suggests that by rapid diagnosis and targeted response it may be possible to nip a pandemic in the bud. While this research has profound implications, further refinement of the modelling is urgently required, and we look to the Medical Research Council to make this a high priority within its influenza research programme.**

5. **While it may be theoretically possible to nip a pandemic in the bud, the practical difficulties remain formidable. We welcome the donation by Roche Products Ltd of three million courses of oseltamivir to the WHO, and we also welcome the efforts of the UN and its agencies to improve surveillance and implement a co-ordinated rapid response strategy. We urge the Government to give their full backing to these efforts.**

As the Committee describes in its report, current modelling results by Professor Neil Ferguson and others, published in the September 2005 edition of *Nature*, indicate that it may be possible to halt an incipient pandemic at source, with a total of a few hundred cases. Such a strategy would, however, present enormous practical difficulties. It would depend upon the outbreak being a single, rural source, and would require suitable organisation on the ground to facilitate the rapid identification of possible cases, and implement anti-viral prophylaxis and area quarantine measures.

This work has been considered by the modelling subgroup of the Department of Health Scientific Advisory Group, which includes Professor Ferguson. The subgroup advised that the Government assist international efforts to make at least three million courses of anti-virals available for initial containment and encourage the construction of realistic detailed local plans to use this resource. The group considered that the major challenge to containment was not uncertainty in the modelling, but the difficulty in implementing the necessary arrangements on the ground. The Medical Research Council (MRC) will also be continuing its work on further refining the modelling of pandemic influenza, and its results will be considered by the group.

The Government is, therefore, fully supportive of the WHO's decision to procure a stockpile of anti-viral drugs which could be deployed to try and contain an outbreak in its early stages, and of Roche's donation of three million treatment courses of Tamiflu for that purpose. However, it is essential that an effective implementation strategy is developed that ensures the anti-virals can be administered so as to maximise the chance of preventing the pandemic virus spreading. The Government is supporting the WHO's continuing efforts in this area.

The Government is also working closely with other governments and international organisations to support those countries which are at high risk of experiencing outbreaks of avian influenza with both financial resources and technical expertise. The Department of Health has already contributed £500,000 to the WHO to support surveillance work in south-east Asia. Following the Geneva conference on pandemic influenza preparedness in November 2005, the government of the People's Republic of China, the European Commission and the World Bank hosted a pledging conference in Beijing in mid-January 2006. The World Bank identified a need of $1.5 billion; and $1.9 billion was pledged, of which the UK committed £20 million for multilateral programme activities over the next three years.

The Government notes the evidence presented by the MRC that the containment strategies considered by Professor Ferguson and colleagues do not consider the situation of a gradual evolution of strains with more efficient human to human transmission and/or diffuse emergence on a widely dispersed geographic front. The need for research on these particular scenarios will be considered by the Department of Health Scientific Advisory Group as part of this programme of work.

The likely success of a containment strategy is much higher if the initial cases arise in a rural rather than urban environment due to the lower probability of rapid spread. Professor Ferguson and his co-workers note that containment fails if cases arise at an early stage in large cities. Modelling of possible containment has therefore concentrated on initial cases in rural areas. The Scientific Advisory Group will also be considering the value of explicit modelling of outbreaks beginning in urban environments.

6. **We further believe that substantial investment by the international community in improving healthcare in south-east Asia represents the best long-term strategy to prevent future influenza pandemics. We recommend that the Government, in collaboration with international partners and the World Bank, make such investment a high priority.**

The Government agrees that ensuring a rapid response capacity in south-east Asia requires a strengthening of generic health services in the region. In particular, strong epidemiological surveillance and early warning systems to detect outbreaks early, with access to high quality laboratory services for speedy diagnosis, and strengthened rapid response capacity are required. Access by the population to quality health-care and information is important to reduce the impact of pandemic influenza on morbidity and mortality, and the resulting social and economic impacts. Strengthened animal surveillance and early detection of viral strains in animals is also important to protect human health. Not all south-east Asian countries, however, are 'developing countries'. Indeed, some of them have strong healthcare systems. DfID is currently supporting health initiatives in Cambodia, China, and Indonesia.

At the international pledging conference held in Beijing in January 2006, the participants agreed to subscribe to a long-term partnership. This should ensure that adequate financial and technical support would be provided to complement national and regional efforts to control avian influenza, in those countries that are currently affected, or at risk of avian influenza. The priority for this assistance will be on developing capacity and infrastructure in the animal and public health sectors, as well as undertaking complementary reforms in related sectors.

7. **Once an influenza pandemic is established, in south-east Asia or elsewhere, there is no realistic prospect of preventing its spread to the United Kingdom . Travel restrictions, quarantine or screening at airports , while they would be highly visible, would only delay the spread of the virus.**

The Government agrees with the mathematical modelling which suggests that the global spread of a pandemic virus is inevitable once the virus is established, even if travel restrictions or screening are implemented at airports. All modelling work will be kept under review as and when relevant new information emerges.

8. **The early and targeted use of anti-viral drugs, not only to treat the first cases in this country, but to provide prophylactic protection to close contacts such as family members or health workers, could both delay and lower the peak of a United Kingdom pandemic. This would reduce the strain on health services, and give more time for the production of a vaccine.**

9. **We are extremely concerned at the lack of clarity in the Government's policy on prophylactic use of anti-viral drugs, and at the possibility that the Government's order of only 14.6 million courses of oseltamivir may have tied the government into a treatment-only policy on using the stockpile.**

10. **We recommend that the Government work together with the HPA and the research community to establish the optimal strategy for the use of anti-viral drugs, and that further orders, if required, should as a matter of urgency be placed to allow this strategy to be implemented. We further recommend that this strategy should incorporate a rigorous cost-benefit analysis.**

11. We recommend that the Government develop back-up plans in case resistance to oseltamivir emerges. These should encompass possible combination therapies or the acquisition of reserve stocks of zanamivir.

As stated in the *UK Influenza Pandemic Contingency Plan*, it is the Government's intention to continue to review and update our plans in the light of new and emerging evidence and expert advice. This applies as much to policies relating to the most appropriate use of anti-virals, where the results of much ongoing work are now emerging, as to any other area.

The decision to purchase Tamiflu, which was made early in 2005, and the quantity of that purchase, took full account of the best national and international expert advice and information available at the time. The immediate imperative was to secure the earliest possible access to supplies and that required prompt decision-making based on estimates of the potential health benefits and prudent planning assumptions, including a 25% clinical attack rate. Initial decisions on how to use the available supplies most effectively were made on the same basis. These indicated that a treatment strategy represented the most efficient overall policy, although the published plan already envisages that some limited prophylactic use of anti-virals may be beneficial in controlling or slowing the early spread of a pandemic. The UK provision compares well with the policies adopted in other countries.

The assumptions upon which these plans are based, and the quantity of anti-virals that should be stockpiled, are subjected to continuous review to reflect advances in knowledge, including from theoretical modelling.

As the Committee recognises, international and national modellers have yet to reach a clear consensus on the value of other strategies for the use of anti-virals. The emerging conclusions of Professor Ferguson and modellers at the HPA, and the case for building further reserve stocks, whether of oseltamivir or alternative anti-virals, is being considered carefully by the Department of Health. The Department will also take into account advice from the Scientific Advisory Group. These policies will also be considered in the context of other potential measures which might contribute to slowing the spread and/or reducing the overall attack rate.

12. We recommend that cuts in HPA funding be reviewed and if necessary reversed, to ensure that the HPA's ability to provide leadership to the health service response is not compromised.

The HPA's budget has not been cut as a result of the Arm's Length Body Review. The HPA provides many important front-line services to the NHS, to local authorities, and to others, and will therefore be at the forefront of efforts to deal with a future pandemic. This has been fully taken into account in setting the HPA's budget in the past and will continue to be taken into account in the future. However, like any service provider, the HPA is expected to improve its productivity and efficiency, so that resources can be redirected towards front-line activities. The HPA is prioritising its use of resources to maximise support for the work of front-line staff, including the Consultants in Communicable Disease Control and technical experts. That is in line with the approach taken to implementation of the Arm's Length Bodies Review, to which the HPA is making a valuable contribution.

13. We recommend that the Government reviews the resilience of systems for supplying information from front-line health services to the centre, and in particular that they ensure that funding for the Royal College of General Practitioners' surveillance service is extended.

One of the key objectives of the UK contingency plans is to ensure that the country is as prepared as possible to meet the threat of a pandemic through the establishment of a strong surveillance and alert system. The Department of Health is working closely with the HPA and others to have in place a surveillance strategy that meets the needs of all those involved in the response to an influenza pandemic. The Department of Health is continuing to fund the Royal College of General Practitioners' Birmingham Research Unit's sentinel GP surveillance scheme. The Department is considering how best to ensure that surveillance systems are enhanced in order to meet the requirements of a pandemic.

14. We recommend that the Government provide advice to PCTs and general practices on the mechanisms for reviewing and if necessary suspending performance targets in the event of a pandemic – such advice is needed now if front-line health services are to develop robust and well-informed contingency plans.

The Department of Health is helping the NHS to be as prepared as it can be and has asked every PCT to draw up robust local contingency plans for dealing with a pandemic. Local decisions about clinical priorities will be taken according to local circumstances at the time. The Department would be in close touch with local NHS organisations during a pandemic and targets would not be allowed to stop local emergency clinical priorities being met.

15. We recommend that mechanisms for storing, prescribing and distributing anti-viral drugs be urgently reviewed; and that the availability of antibiotics, oxygen and other supplies be examined and if necessary reinforced.

In September 2005, the Department of Health published a framework for the NHS regarding the storage and distribution of anti-viral drugs. The framework provides guidance to support the development of local plans by the NHS to make those medicines available for the treatment of patients. The overall aim is to ensure that anti-viral drugs are available to treat patients suffering from pandemic influenza within 48 hours of the onset of symptoms.

The Department is also actively reviewing the likely availability of other medical supplies, including antibiotics, based on the range of planning assumptions and is seeking to stockpile relevant supplies where appropriate.

16. Despite the duties imposed on local authorities by the Civil Contingencies Act 2004 to develop contingency plans and participate in Regional Resilience Forums, we are not convinced that local government is yet fully aware of the implications of an influenza pandemic. We urge the Government to provide clear and unambiguous direction and guidance in this area.

The Civil Contingencies Act requires local authorities to maintain plans to mitigate the effects of emergencies, including pandemic influenza, and to ensure that they can continue to exercise their functions during an emergency, as far as is reasonably practical. The Government has therefore been working to encourage planning in local authorities and meets regularly with the Local Government Association to discuss emergency planning, including planning for an influenza pandemic.

Risk assessments at local and regional levels have consistently identified pandemic influenza as one of the key hazards for resilience planning. Central Government has issued guidance on the implications of pandemic influenza for maintaining business continuity, which was made available to local authorities through regional resilience fora in the summer of 2005, and a further series of guidance notes will be issued. Local authorities have been working with the NHS and other partners in Local and Regional Resilience Forums to make preparations. Good progress has been made, but this is a complex and difficult problem and more work needs to be done. This work is being undertaken as a priority in every region.

For example, in London, a workshop on ensuring business continuity in the event of an influenza pandemic was held in October 2005.The workshop was attended by over 50 delegates drawn from local authorities, the health sector, the transport sector, utilities, business, the voluntary sector and the Greater London Authority. In addition, the Civil Contingencies Secretariat (CCS) in the Cabinet Office has also set up a feedback forum on pandemic influenza to ensure the engagement of Category 1 responders (as defined in the Civil Contingencies Act), which includes local authorities. This met for the first time in November 2005.

17. We are alarmed at the risk of serious disruption to food supplies, and at the lack of contact between the Government and the major food retailers. The Government urgently needs to address the resilience of food distribution networks.

The Government does not agree that there has been a lack of contact with food retailers regarding an influenza pandemic and draws attention to the fact that it initiated a review of food chain resilience with them and other stakeholders in June 2005.

Defra's Food Chain Emergency Liaison Group (FCELG) meets regularly to discuss emergency planning for dealing with disruptions to food supplies as well as food chain resilience issues. The Group comprises representatives from all key sectors in the food chain, including the British Retail Consortium (BRC) which represents food retailers. In consultation with the Group, Defra has promoted Business Continuity Planning best practice within the food industry and has commissioned research to establish, amongst other things, the extent to which best practice is currently being observed.

Defra, as sponsor of the food and drink industry, forwarded copies of the Department of Health's *UK Influenza Pandemic Contingency Plan* to key trade bodies, including the BRC, with a request for their views to help inform the planning process. The BRC's response was encouraging regarding the industry's preparedness. Subsequently, a possible influenza pandemic and its implications for the food industry were discussed by the FCELG. Aided by a presentation from a member of the Department of Health's influenza pandemic team, members were asked to review specific aspects of food chain resilience with their respective sectors. A special meeting was subsequently convened to discuss the findings, at which the Group agreed a number of follow-up actions, including in respect of the resilience of food transportation. In addition, a number of other meetings were also held between Defra avian influenza experts and food retailers during 2005.

18. All departments of Government need to work together in preparing for a possible pandemic, but we do not believe the Department of Health can provide strong enough leadership to achieve this. We therefore support the view of Dr David Nabarro that the importance of pandemic influenza contingency planning should be underlined at the highest level within Government. The development and implementation of contingency plans should be the responsibility of a Cabinet-level Minister for contingency and disaster planning, located within the Cabinet Office.

The Government firmly believes that the Department of Health is the right Department to take the lead responsibility for pandemic influenza planning and that it is fully capable of fulfilling that role. The Department is supported by senior officials from the CCS in the Cabinet Office, which helps to co-ordinate cross-government action. Work is also being done through an interdepartmental planning group that is chaired jointly by the Department of Health and the CCS.

This work has been steered by Ministers during 2005 and is being given further direction and impetus through the Cabinet Committee on Influenza Pandemic Planning (MISC32), which is being chaired by the Secretary of State for Health; with the Cabinet Office providing the Secretariat. We have made good progress on developing all aspects of preparing for a pandemic, including non-health issues such as social interventions, maintaining essential services, dealing with fatalities, ensuring business continuity and the care of British nationals overseas.

The Government does not, therefore, believe that it is necessary to appoint a Cabinet-level Minister with specific responsibility for contingency and disaster planning. The Cabinet Office co-ordinates resilience across government under the Security and Intelligence Co-ordinator, Sir Richard Mottram. The Cabinet Office takes on this co-ordinating role in all areas of policy. The Home Secretary has overall responsibility for safety and security. Supporting him, lead Ministers in lead departments have clear ownership of specific issues – for example, the Secretary of State for Health is clearly in the lead on planning for an influenza pandemic. This is logical and makes best use of departmental expertise. In the event of an influenza pandemic emerging, the Civil Contingencies Committee will be convened and will co-ordinate strategic decision making on UK national priorities across all sectors.

19. In the event of a pandemic a clear message and direction from all branches of Government will be critical, and we recommend that the Government develop and publicise a strategy for proactive dissemination of key information and advice, using all forms of national and local media.

The Government already has a full strategy in place for the proactive dissemination of key information and advice to the public and health professionals during a pandemic, which continues to be refined.

The Department of Health is the lead government department on issues of human health and will therefore be the primary source of information and advice both before and during a pandemic. The Department first published the communications strategy as an annex to the *UK Influenza Pandemic Contingency Plan* in March 2005.

The Cabinet Office has co-ordinated a cross-government communications strategy that will ensure a consistent approach to communications across all government departments, both before and during a pandemic.

Strategic research into the attitudes, awareness, and understanding of pandemic influenza amongst the public and health professionals was undertaken in 2005 which helped inform and shape the advertising campaign currently being developed in readiness for an influenza pandemic. All draft materials are subjected to rigorous pre-testing to ensure that they fulfil the information needs of the public.

The strategy offers a stepped approach to the provision of information, proportionate to the WHO alert level, and draws on a range of media, including the news media, leaflets (including through a door drop), websites, telephones and possibly SMS text messaging. An information pack has already been sent to GP surgeries, pharmacies and other primary care settings and considerable work has gone into engaging NHS communication teams in pandemic planning.

The Department of Health is currently preparing new materials containing public health advice for those travelling to regions where avian flu has been detected in poultry. The leaflet reinforces the low risk presented by avian flu providing sensible precautions are taken.

20. The Government should follow the example of the United States in making a major investment in developing new vaccine production techniques. The industry has been too conservative in relying on tried and tested methods; it is time for the Government to show leadership.

We believe that the vaccine industry is fully cognisant of the advantages and disadvantages of reliance on egg-based vaccine production and is also better apprised than those outside industry to its manufacturing capacity and its opportunities for expansion. All manufacturers appear to be giving serious consideration to switching to cell culture-based production, but that change is not without risk. The manufacturers are also undertaking extensive research into adjuvanting vaccines with both old and new adjuvants, in efforts to increase antigen availability. There is also ongoing work in the biotechnology industry to develop DNA vaccines along with suitable devices for their administration.

The Department of Health believes that these industry-based efforts are appropriate for the challenges faced. It is also working to support those efforts by ensuring that the research which it commissions on vaccines is in line with that of other research funders in Europe and North America. It has already commissioned a review of all antigen sparing techniques that could extend antigen availability and is considering how best its recommendations can support preparedness for an influenza pandemic.

The WHO has also been actively involved in co-ordinating multilateral meetings between countries and vaccine manufacturers in order to identify ways of expanding influenza vaccine demand with matching increases in production capacity. The members of the Pandemic Influenza Preparedness group of the Global Health Security Action Group (GHSAG – the G7 countries, Mexico, the European Commission and the WHO), have also been reviewing their strategies for vaccination in the event of an influenza pandemic.

21. The Government should explore mechanisms to encourage the free exchange of proprietary technology between vaccine manufacturers.

This is a technical matter which we can put to the vaccine manufacturers, but the Government cannot tell them what to do on such matters. The production processes of each vaccine manufacturer are tailored to their own facilities. The National Institute for Biological Standards and Control will provide vaccine virus reference strains to any manufacturer requiring them. Beyond that, we encourage manufacturers to make publicly available the results of their R&D through publication in peer-reviewed scientific journals.

22. With a view to promoting public health, the Government should continue to encourage take-up of the annual 'flu jab' by at-risk groups. However, we do not believe that the corresponding increase in manufacturing capacity will be sufficient to meet the challenges of a pandemic. The Government should explore other incentives to the industry to develop surge capacity.

There will be no let up in the Government's efforts to protect vulnerable groups against seasonal influenza. The UK has a good record for uptake of seasonal influenza vaccine in people aged 65 and over, with year-on-year increases in uptake since the introduction of the programme. We will be working hard to ensure this trend continues and that uptake in younger clinical risk groups is optimised.

The Joint Committee on Vaccination and Immunisation will continue to review seasonal influenza immunisation policy recommendations annually.

The Government is tendering for a sleeping contract for a pandemic influenza vaccine that can be produced when the strain has been identified. This initiative aims to provide certainty to the vaccine industry as well as resources to develop products and carry out R&D.

23. In the event of a global pandemic, inequitable distribution of limited vaccine stocks could have serious implications for international relations. We therefore urge the Government, in conjunction with United Nations agencies, to examine ways to develop vaccine manufacturing capacity globally.

The challenge of inequitable distribution of vaccine stocks in the event of a pandemic has been acknowledged internationally. The WHO and other international organisations have been exploring how access to vaccines for poor countries might be improved and we will work closely on these plans when they become available.

24. We welcome the initiative of the European Medicines Evaluation Agency in developing a 'mock-up' dossier for a pandemic vaccine. We recommend that the Government invests in one or more 'mock-up' dossiers with a view to removing the regulatory barriers to a new vaccine.

The Department of Health has met with individual manufacturers and is encouraging them to make submissions to the European Medicines Evaluation Agency in respect of mock-up dossiers. This will help to speed up the licensing of a pandemic influenza vaccine.

25. We recommend that the Government funds further research on alternative treatments for pandemic influenza. This should include a full assessment of the risks and benefits of fractionation. If such risk analysis is left until a pandemic outbreak it will be too late.

Research and development is key to effective preparedness for pandemic influenza. The MRC is actively involved and its chief executive has been to south-east Asia to see how the MRC can most usefully contribute.

The Department of Health is currently finalising a strategy that will ensure that its vaccine, anti-viral and diagnosis-related research activities are in line with those of other research funders in the UK, Europe and North America. To that end, the MRC held a workshop in December 2005 to identify particular strategic research needs for pandemic influenza, and will be meeting with the Department of Health to begin the process of designing a co-ordinated R&D strategy.

When this consultation process is complete, we will be in a position to consider commissioning high-quality research that is both applicable to the needs of the UK and co-ordinated with the efforts of other countries. The strategy will build on the body of Government-funded research completed in the recent past and currently under way. This includes, for example, a £400,000 study commissioned by the Department into the optimum dose and dosing schedule for influenza vaccine when given to people for the first time. With regard to fractionation technology, the Department of Health is commissioning a formal risk assessment of the benefits and hazards of using immune human serum as a prophylactic agent.

To co-ordinate the pandemic flu-related research that is supported by all of the public funders, the Government is setting up a cross-government working group. It is planned that the group will include the MRC (who will probably chair it), the Biotechnology and Biological Sciences Research Council, Defra, the Department of Health, DfID, the Office of Science and Technology and the FCO.

26. We recommend that the Government initiates a public dialogue on the regulatory barriers to research in the event of a pandemic. We believe the public would support this research if its benefits were properly explained.

The Government also recognises the unique opportunities that a pandemic would present for research. We are setting up a working group under the chairmanship of the Inspector of Microbiology and Infection Control to examine a range of issues around the regulation of research, with the aim of ensuring that we have protocols agreed and in place before a pandemic emerges. We will also be working with the MRC to try to design research studies in advance and deal with ethical clearance as far as possible ahead of time.

The MRC has recognised that once a pandemic starts there will be a limited window of opportunity in which to address a number of important questions about the clinical course, pathogenicity, response to treatment and optimal clinical management. Clinical experience of the infection in, for instance, Vietnam in 2005-2006, will not necessarily be applicable to whatever strain eventually threatens the UK population. The Council has made provision for proleptic 'readiness' grants: these may be submitted, assessed and awarded before the research can be put into effect, so that expert-reviewed protocols are in place to address important, urgent questions if an influenza crisis occurs.

Getting such research under way promptly will, however, depend on the regulatory processes being rapid and appropriate to the risks and benefits of the research to affected individuals and the wider population. The MRC agrees with the evidence of Professor Zambon that there is a need to plan ahead now, and the Council and the Department of Health will be working together on research priorities and regulation for the crucial, early-pandemic period.

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