

Independent Review of the Swine Flu Response

Memorandum by the Department of Health

1. Introduction

The Government's strategic objectives for an influenza pandemic

1. In planning and preparing for an influenza pandemic, the Government's strategic objectives were, and remain, to:
 - protect citizens and visitors against the adverse health consequences as far as reasonably practicable;
 - prepare proportionately in relation to the risk;
 - support international efforts to prevent and detect its emergence and prevent, slow or limit its spread;
 - minimise the potential health, social and economic impact;
 - organise and adapt the health and social care systems to provide treatment and support for the large numbers likely to suffer from influenza or its complications whilst maintaining other essential care;
 - cope with the possibility of significant numbers of additional deaths;
 - support the continuity of essential services and protect critical national infrastructure as far as possible;
 - support the continuation of everyday activities as far as practicable;
 - uphold the rule of law and the democratic process;
 - instil and maintain trust and confidence by ensuring that the public and the media are engaged and well informed in advance of and throughout the pandemic period;
 - promote a return to normality and the restoration of disrupted services at the earliest opportunity.

2. Cross-government planning for a pandemic has been well established in the UK for a number of years. The Government's framework for responding to a pandemic was set out in *A National Framework for responding to an influenza pandemic*. This was published jointly by Cabinet Office and the Department of Health in 2007 and replaced previous planning documents. It was based on best available evidence including scientific, clinical and ethical advice and was supported by a range of more detailed guidance documents for NHS, social care and other organisations.

3. The National Framework set out a 'defence in depth' approach to preparing for and responding to a pandemic. This is a strategy to protect the public by:
 - reducing the spread of the virus, supported by good hygiene advice, provision of face masks for health care workers and appropriate social distancing measures
 - minimising serious illness, supported by rapid access to antiviral medicines and healthcare; and
 - avoiding deaths, supported by access to vaccines.
4. When the new H1N1 virus emerged in April 2009, our preparations for a pandemic were well advanced and the WHO DG considered the UK to be in the vanguard of countries worldwide in preparing for a pandemic. Preparations in place included:
 - stockpile of antivirals sufficient for 50% of the population;
 - developed business case for HMT approval to accelerate procurement plans for antibiotics, face masks, respirators and other consumables;
 - plans for a National Pandemic Flu Service to enable rapid distribution of antivirals to the population;
 - public communications materials ready to go,
 - preparedness plans at all levels of the NHS;
 - joint planning with social care, private and third sector organisations and others across government;
 - a suite of training and exercise tools to enable organisations to test plans;
 - preliminary guidance to support surge planning;
 - an ethical framework to assess the ethical dimensions of the response;
 - well established and properly constituted scientific advisory committees..
5. Pandemic preparedness was identified as a priority for the NHS and was included as such in the *NHS Operating Framework* from 2008 onwards. This required all NHS organisations to have robust plans in place to deal with an influenza pandemic and to refine and test their pandemic plans.
6. Organisations in health and other sectors also tested plans on an ongoing basis with exercises ranging from the national exercise *Winter Willow* in 2007 to "off the shelf " organisation based exercises and the multi-agency exercise *Peak Practice* held in each region in 2009.

The response to the H1N1 pandemic

7. The Department of Health's aims during the H1N1 pandemic were to -
- protect the public and minimise illness and death due to the pandemic virus;
 - minimise the burden on the NHS;
 - minimise economic impact;
 - minimise societal disruption;
 - maintain people's confidence.
8. Although the pandemic proved to be relatively mild, it has nonetheless caused 457 deaths¹ in the UK and large numbers of young and otherwise healthy people to be seriously ill. A summary of the timeline for the response is set out at Annex A.

Roles and responsibilities

9. The NHS is responsible for the delivery of health services². Managing the pandemic required a shift from business as usual processes, where operational decisions are devolved, to a command and control system able to coordinate the response, supported by effective communications and strong links with partners across the wider system.
10. The Chief Medical Officer (CMO), Sir Liam Donaldson, is the UK Government's principal medical adviser and the professional head of all medical staff in England. The Chief Medical Officer provides advice to the Secretary of State for Health and other Health Ministers, Ministers of other Government departments and on occasions to the Prime Minister directly.
11. In the course of the influenza pandemic, the CMO's role was one of strategic leadership and advising on policies, interventions and measures necessary to reduce the impact of the disease on the public's health as well as to maintain public confidence in the handling of the emergency. He also acted as the main media spokesperson throughout the pandemic. This included providing a weekly briefing presentation to journalists and regular advice and explanations to the public. The CMO worked closely with Ian Dalton and used his knowledge and experience of clinical services to advise on policy in this regard. The CMO also liaised closely with the Director-General of the WHO.
12. Professor David Harper, Director General for Health Improvement and Protection and the Department's Chief Scientist, had overall responsibility for pandemic influenza policy before and during the pandemic. Professor

¹ As at 18th March 2010

² The Department's relationship with the NHS and the responsibilities of the different organisations within the Service are set out in the *Statement of NHS Accountability*, available at the following link – http://www.dh.gov.uk/dr_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_093418.pdf

Lindsey Davies, National Director of Pandemic Preparedness had been responsible for Department of Health and NHS preparedness for pandemic since May 2006 and the Department of Health's role as lead Department. During the response to the swine flu pandemic, Professor Davies provided professional and policy leadership to the response including overseeing the procurement of countermeasures and liaison with clinical and professional organisations.

13. The Department appointed Ian Dalton as National Director for NHS Flu Resilience in May 2009 to co-ordinate and provide leadership to the NHS throughout the response to swine flu. The Department also appointed Roy Taylor to increase the focus on social care in recognition that close partnership working would be essential during a pandemic surge.
14. Co-ordination and oversight of the health and social care response in England were supported by formal governance arrangements put in place for the purpose in the Department of Health. These include the establishment of a Swine Flu Delivery Board, jointly chaired by the Chief Medical Officer and the Chief Executive of the NHS, and a Swine Flu Operations Board, jointly chaired by the National Director for NHS Flu Resilience and the Director of Pandemic Preparedness, Professor Lindsey Davies.
15. The Department continued to support the NHS in strengthening their response in key areas, for example increasing critical care capacity with the development of a critical care strategy in September 2009.
16. Boards of NHS organisations published a statement of readiness in September 2009 as part of assurance that all NHS organisations were fully ready to respond to a second wave of pandemic flu during the winter months. Overall the pandemic preparations and the response to this outbreak have tested and strengthened the NHS ability to be resilient.

2. Overview

What aspects of the Pandemic Flu Response worked well? What would you wish to do differently in another pandemic?

What aspects of the Pandemic Flu Response would have had to change in the event of a more severe pandemic?

What worked well

17. The detection of swine flu virus in humans in Mexico in April 2009 signalled the start of the first pandemic in more than forty years. The first cases emerged in the UK at the end of April and this led to the successful rapid mobilisation of the HPA and the NHS in England on a large scale.

NHS response

18. The forward planning for an influenza pandemic undertaken across the NHS, with their partner organisations and in the Department stood us in

good stead at this time. As a pandemic had been identified as one of the highest risks for UK organisations a significant amount of detailed preparatory work had been undertaken at national and local level. The inclusion of pandemic preparedness as a priority in the *NHS Operating Framework* in 2008/09 and 2009/10 meant that NHS organisations had plans in place. Targeted support to NHS and social care organisations was provided by a dedicated section of the Department's Pandemic Influenza Preparedness team.

19. Overall, the NHS response to the swine flu pandemic was excellent, with the service able to continue providing safe and effective care to all patients, despite the additional demand.
20. Initial information suggested that, under the reasonable worst-case scenario, the levels of sickness would far exceed the ability of the NHS to respond. As a result, surge plans were rapidly put into place supported by more detailed workforce guidance. This was particularly necessary across those services like critical care and the ambulance service that have more limited flexibility in their capacity.
21. Although the impact of the virus did not reach the levels of the reasonable worst-case scenario published in the *National Framework for responding to an influenza pandemic*, nor in the planning assumptions issued during the pandemic, the additional plans and preparations put in place tested and strengthened the resilience of the NHS and enabled it to maintain public confidence. They have also already paid dividends in the management of winter pressures, emphasising the generic nature of some aspects of preparedness and resilience.

Vaccines

22. Advance Purchase Agreements (APAs) were in place to guarantee access to the first production supplies during a pandemic. However, the speed of virus transmission around the world means that vaccine will not be available for use during the early stages of a pandemic.
23. The delivery of the swine flu vaccine during the pandemic provided an unprecedented opportunity to protect the most vulnerable people in the population from the risk of complications due to swine flu. This required the mobilisation of a vaccination campaign on a large scale. Uptake rates were encouraging, but always showed room for improvement.

National Pandemic Flu Service

24. The NPFS was successful in relieving pressure on frontline services, allowing GPs to focus on the very ill. It proved effective, with nearly 2.5 million assessments and with 97% of people who collected their antiviral medication from ACPs doing so within 48hrs. It allowed people to be assessed and to access treatment quickly, while reducing the pressure on primary care services. The "end point" of all NPFS assessments was closely monitored by NHS Direct which, together with excellent support and professional input from the Royal College of General Practitioners,

formed part of the quality assurance system. Public engagement research showed –

- 88% of those using the online service and 85% using the telephone were satisfied, with an overall satisfaction figure of 86%.
- about one in four people were advised to contact their GP.
- the main reasons for people not collecting antivirals was because they felt better or felt they would recover without treatment. Some were concerned about potential side effects.
- BME groups raised the most concerns about the service.

Medicines

25. Legislation was put in place rapidly to ensure that access to antiviral medicines was made in an easy and flexible way, as soon as possible after people presented with symptoms of flu. Antiviral collection points were established to supply antiviral medicines on receipt of vouchers.

Joint working and partnership

26. Whilst the impact of swine flu never fully tested social care, staff in statutory, independent and voluntary organisations and services responded well. As the virus emerged previous preparatory work was strengthened by workshops for private and third sector organisations, reflecting a real willingness for organisations to work in partnership with statutory agencies.

27. The international networks, both formal and informal, established before the pandemic paid dividends during the response. This enabled faster information gathering and sharing and worked particularly through the WHO, EU, Global Health Security Action Group (G7 plus Mexico) and wider groups and committees.

28. The CCC and 4 Nations structure ensured a cross-government strategic approach to the response. This close collaborative working across Government and across different sectors (particularly NHS and social care) and by clinical professions resulted in good communications and broad clinical and professional support for the response.

Communications

29. Throughout all stages of the pandemic, the importance of effective and regular communications with the public, the NHS and social care professionals has been demonstrated by the Department's response through public media campaigns; Chief Medical Officer (CMO) briefings; and NHS and Social Care leadership.

30. The Department had been planning for effective public communications in the event of a pandemic for a number of years. We were able to instigate a leaflet door drop to all UK households in the early days of the outbreak quickly, having already secured a mailing contract and advance paper purchases. While some aspects of pre-planning did have to be modified,

(for example some pre-planned advertising was geared towards a more severe pandemic), earlier work to identify lead stakeholders and key messages provided a useful basis for the real-time response. The Department's Communications team as a whole was also able to mobilise very quickly and set up an emergency media management operation in the first few days and weeks that was, in due course, anchored by regular formal CMO briefings to the media.

Expert advice

31. Close monitoring of the evolving scientific situation in the UK and abroad alongside the strong network of scientific and clinical advisory committees (SAGE, PICO and SPI-M modelling sub-group) ensured that policy continued to be based on the most up to date scientific evidence.
32. In addition, we were able – through international co-operation and work of, for example, the HPA and SAGE - to learn lessons from elsewhere, eg US, Australia and the Southern Hemisphere. Australia's experience of using ECMO as a treatment was particularly helpful in shaping the UK's response; and teleconferences for paediatric and adult intensivists, hosted by HPA, were instrumental in sharing valuable clinical experience.
33. Having an agreed ethical framework, that had been subject to public consultation, to assess the ethical dimension of the response; and an independent ethics committee familiar with pandemic influenza issues and available to provide advice at short notice, was invaluable. This contributed to a patient centred approach that sought at all times to respect the confidentiality and dignity of those affected by the virus.

Research

34. The National Institute for Health Research Evaluation, Trials and Studies Co-ordinating Centre (NETSCC) fast-tracked the commissioning of research in the priority areas recommended by SAGE. By 19 August, 14 research proposals were funded, at a cost of £2.25 million³.

What might we do differently in another pandemic

35. While much did go well, it is inevitable that improvements could be made. At a strategic level, the following can be highlighted:

Understanding of the limitations of scientific evidence

36. Ministers sought to base their decisions on the best scientific evidence available at the time. However, this is bound to be limited, particularly at the start of a pandemic, by the lack of data and the challenges therefore of attempting to model potential outcomes during a pandemic. This raises issues about how best to communicate scientific advice and its inherent uncertainties to the key partners including public and media.

³ An article outlining the process followed was published in the Lancet on 21 January 2010. See [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(10\)60068-2/fulltext?version=printerFriendly](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(10)60068-2/fulltext?version=printerFriendly)

Scenario-based planning and WHO phases

37. We were fortunate and the pandemic was less severe than it might have been. We recognise the need to ensure plans robust are in place for a wider range of scenarios, including relatively mild events such as that of the 2009/10 pandemic.
38. Much of our pre-pandemic planning was linked closely to the WHO phases. In the event, the H1N1 pandemic developed rapidly in the UK and in many areas pre-dated the move to Phase 6 by WHO on June 11th. In addition, the UK alert levels anticipated in the National Framework proved less helpful than anticipated in the face of local 'hotspots'. Future plans will need to be based on a more flexible, scenario-based approach.

Communications

39. There was a large appetite from clinicians for clinical information and for questions to be answered rapidly. There is a strong need to ensure that all organisations advising clinicians, including the Department of Health, Royal Colleges, the HPA and others, present a consistent picture in what could be a rapidly changing situation.

Transition between phases of the response

40. The transition and recovery phase back to business as usual has proved complex and challenging. This is at least in part because of the complexity of standing down different elements at different times, whilst retaining knowledge and communicating consistently. Further preparedness work on this is needed.
41. Lessons learnt from the pandemic in relation to the operational level within the NHS will be the subject of a separate report by Ian Dalton, National Director for NHS Flu Resilience.

Planning for a more severe pandemic

42. In a more severe pandemic, we would need to be ready if required to move faster from 'containment' to 'treatment'. This would mean, among other things:
- the NPFS might need to start sooner and might be required in all four countries.
 - collection points would need to be able to cope with the increased numbers of people wanting to collect antivirals - particularly if they were trying to operate other retail (eg pharmacies) or public service activities (eg local authority facilities) at the same time
 - people would need to be encouraged to use the on-line service as far as possible if the Call Centres were affected by higher levels of sickness;
 - further consideration of the level of ID checks would be required for the NPFS

- determining at what stage to switch to using the strategic stockpile of Relenza as the primary antiviral as Tamiflu stocks are reducing.
- increased pressures could lead to more prioritisation in critical care, including reductions in elective activity.
- the possibility of needing to trigger the arrangements for providing access to the antibiotics stockpile to support primary and secondary care.
- the global nature of the medicines supply chain will result in the need to accelerate plans to support the continuity of medicines supply in the UK.

3. Vaccines

What led to the decision made to opt for 100% rather than 45% coverage of the population, based on two doses per patient?

43. On the 11 May, CCC agreed to purchase Pre-Pandemic Vaccine (PPV) for 45% of the population and that if a pandemic was declared by WHO then H1N1 vaccine for the remaining 55% population could be purchased, subject to further discussion in CCC at that time. This was in line with previous scientific advice from JCVI, endorsed by SAGE.
44. WHO declared Phase 6 on the 11 June and the Advance Purchase Agreements (APAs) were activated; these superseded PPV procurement. On the 17 June, CCC agreed to proceed with the procurement of sufficient pandemic specific vaccine for 100% of the population but asked officials to try to secure whatever flexibility they could in the contracts with the manufacturers. The decisions were recorded in CCC minutes of the 11 May and 17 June meetings and accompanying papers.

On what grounds was the decision to purchase 30m extra doses of vaccine made?

What drove the procurement policy (e.g. number of companies, break points etc)?

What was the impact of the WHO alert levels on procurement of vaccines, for example in relation to APAs?

Negotiation of Advanced Purchase Agreements

45. In April 2004, the EMEA published guidance entitled *Committee for Proprietary Medicinal Products Guideline on Dossier Structure and Content for Pandemic Influenza Vaccine Marketing Authorisation Application (CPMP/VEG/4717/03)*. This document described the requirements for a “mock up” licence and how these would be subject to a variation in a pandemic. This paved the way for discussion with manufacturers about the potential for Advanced Purchase Agreements for pandemic specific vaccine.

46. Advanced Purchase Agreements were agreed in July 2007 following a competitive tendering process. The meetings with the manufacturers to discuss the APAs were set against a background of increasing cases of H5N1 in humans following close contact with infected birds. The agreements were not, however, specific to H5N1.
47. Only two companies met the requirements for the UK procurement of advanced purchase agreements and the decision to reach agreement with both was based on an assessment of risk if either then had production difficulties. The effect of the APAs was to allow for the UK to receive a proportion of the production capacity of each company.
48. The best scientific advice available at the time and until around October 2009 was that two doses of vaccine would be required and hence no provision was made in the APAs for single dose requirements.

Procurement of H1N1 vaccine

49. Both GSK and Baxter were in a position to commence production of a swine flu vaccine ahead of the pandemic declaration. As agreed by CCC the Department therefore commenced negotiations with GSK and Baxter for the supply of a pre-pandemic swine flu vaccine. This was a supplementary agreement to the APAs and would transform to the pandemic vaccine supply under the full APA when and if a pandemic was declared. These negotiations were still ongoing when the pandemic was declared.
50. Once WHO Phase 6 had been declared, the Department was obliged under the terms of the APAs to confirm the quantities of vaccine to be ordered from each manufacturer.
51. Our objective, agreed by Ministers, was to procure sufficient vaccine to be able to vaccinate the entire population, should that be necessary. Following receipt of information from Baxter at the end of July that their manufacturing process was experiencing problems and the yield of vaccine from them would be much lower than previously set out, Health Ministers agreed to purchase 30m extra doses from GSK to cover this shortfall.
52. As requested by CCC, the Department sought to include a break clause in the purchase agreement; Baxter Healthcare agreed to this but GSK did not. This was in line with the agreements they reached with other countries.

What were the factors driving the distribution policy of focusing on high risk groups?

53. JCVI had advised in October 2007, in relation to pre-pandemic vaccines, that, "while universal vaccination was the preferred option, should prioritisation be necessary, then the following groups, in no particular order, should be targeted:
 - health and social care workers,

- children under 16 years and
- vulnerable groups such as those identified for seasonal influenza vaccination.”

54. The Committee did point out, however, that the groups might be subject to modification or re-ordering. This would be necessary in the light of scientific developments, vaccine availability at the time of a campaign and real time knowledge of the scientific and clinical impact of the pandemic virus – see:

http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@ab/documents/digitalasset/dh_095066.pdf

55. Universal vaccination relates to vaccination of 100% of the population. Taking the priority groups listed above together would equate to about 40-45% of the population.

56. In respect of the pandemic programme, JCVI confirmed that the primary objective of a swine flu vaccination programme was to reduce mortality and morbidity and revised the priority groups in light of emerging knowledge of the pandemic (August 2009):

- “The Committee appreciates that the Government has decided to procure sufficient vaccine for the whole population. However, the vaccine will not be available for the entire population at once. Therefore, the Committee advised that the following groups should be prioritised for vaccination in the following order once the vaccine has been licensed
- Individuals aged between six months and up to 65 years in the current seasonal flu vaccine clinical at-risk groups*
- All pregnant women, subject to licensing conditions on trimesters
- Household contacts of immunocompromised individuals
- People aged 65 and over in the current seasonal flu vaccine clinical at-risk groups“

See minutes at -

http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@ab/documents/digitalasset/dh_108037.pdf

57. The Committee supported the early use of the licensed vaccine in frontline health and social care workers. This is because they are at increased personal risk of infection and of transmitting that infection to susceptible patients; and because this will help to maintain the resilience of the NHS:

http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@ab/documents/digitalasset/dh_104372.pdf

58. The Committee on Ethical Aspects of Pandemic Influenza agreed that the proposed priority groups for vaccination, including frontline health and social care workers, were ethically acceptable.

Which options were considered for delivering vaccines and what led to the choice of GPs?

59. A PCT-based system (that is, using PCT practitioners) or a GP system were both considered as possible delivery mechanisms for the vaccination programme for the risk groups. Using GPs was deemed to be most straightforward as the initial at-risk groups were already routinely accessing GPs for seasonal flu vaccination and it would therefore be straightforward to identify, contact and vaccinate eligible patients.

60. Initial supplies of vaccine were very limited. The distribution strategy adopted ensured that all parts of the country received vaccine as soon as possible and on an equitable basis during a period when vaccine supplies were limited.

Could negotiations with GPs have been initiated in advance of any pandemic emerging?

61. Discussions with the General Practitioners Committee (GPC) of the BMA started in the summer of 2007 when key roles and core work of GPs during a flu pandemic were considered.

62. In May 2008 joint guidance was issued by the BMA and NHS Employers setting out the key principles for payments to GMS practices during a flu pandemic.

63. Following that, the Department worked with the GPC on an emergency Statement of Financial Entitlements. This provided legal force to income protection and was able to be implemented as soon as a pandemic reached a level, either nationally or locally, which prevented practices from carrying out all aspects of their contracts.

64. Discussions about payments to GPs for administering vaccinations were held with the General Practitioners Committee of the BMA as soon as it became clear that there was likely to be a swine flu pandemic. At that time it was not known how many of the country's population would need to be vaccinated or how many doses of vaccine would be required. Both were important factors in determining whether or not GP practices would have the capacity to carry out the vaccination programme.

65. The swine flu vaccination programme was announced by the Chief Medical Officer on 13th August 2009. The deal with GPs was announced on 14th September 2009, a full two months before the majority of GPs started to receive their first deliveries of swine flu vaccine.

66. Phase 2 of the swine flu vaccination programme was announced by the CMO on 19 November 2009. The programme was extended to children over six months and under five years after the priority groups had been vaccinated. It began in December 2009. Negotiators from the BMA's

General Practitioners' Committee held discussions with NHS Employers to seek a national agreement on the vaccination of this group through GPs. However, this did not prove possible and Ministers therefore asked PCTs to secure the delivery of the vaccination of children in this age group through local enhanced services or other locally commissioned arrangements.

4. Containment

How were the decisions made on containment? What issues drove the policy?

67. At the onset of the H1N1 pandemic in the UK, there was little evidence about the severity and impact of the virus. The focus during the initial phase was therefore on treating affected individuals and on reducing the spread of the disease, to the extent that it could be achieved. In addition, the approaches adopted in the initial phase allowed the opportunity to increase our understanding of the disease through HPA surveillance arrangements and for the NHS to prepare for more widespread disease.
68. The HPA led the containment phase response, supported by the NHS in running the Flu Response Centres. The response comprised:
- identifying and tracing close contacts of probable and confirmed cases, including those arriving from Mexico, and gathering and recording epidemiological data;
 - giving post exposure prophylaxis to all close contacts of probable and confirmed cases of pandemic swine influenza. In primary schools, this was generally those children in the same class as the case and those in other classes who had spent an hour or more in the same room as the case when the individual was symptomatic. In practice, this may have meant all the classes in the same school year;
 - advising on the closure of schools in the event of a probable or confirmed case in a school setting;
 - meeting flights from Mexico and having a member of staff present in airports during the hours that flights are arriving;
 - making information available at all ports of entry;
 - putting in place enhanced surveillance arrangements.
69. The policy was driven by pre-pandemic framework developed on the basis of many years investigation by SPI-M. This is described in the *Modelling Summary*, but conformed to the actual situation based on UK and international surveillance.

What were the triggers for moving away from containment, and what were these based on?

70. It was recognised from the outset that it would not be possible to “contain” the virus in the UK. At the meeting of the CCC of 6 May, Ministers agreed that the containment phase, including prophylaxis of all close contacts, should be continued by the HPA until one of three triggers (below) was reached:

- clear evidence of sustained community transmission;
- robust evidence that the disease was no worse than regular seasonal influenza infection;
- the number of cases was such that HPA operational resources, augmented by NHS support, were unable to meet the demand (estimated to be 3,000 cases, but later 10,000 cases).

71. The situation was reviewed on a daily basis, drawing on epidemiological and scientific advice from SAGE and HPA.

72. In July 2009, in the light of the advice from SAGE and HPA, Ministers concluded that the UK had reached the point where:

- the virus was spreading in communities and would continue to spread, with the emergence of a number of clusters;
- much more was known about the nature and threat of the virus; and
- the NHS had had time to adapt its preparations.

73. The UK had moved past the stage where swabbing patients to confirm diagnosis and tracing contacts was practical or effective and so it was appropriate to move to a treatment only phase, ie treating all those who were ill.

74. The decision was therefore taken by all four UK nations on 2 July to move from containment and outbreak management policies to the treatment phase. The Secretary of State for Health announced the change in an oral statement in the same week.

What was the policy on prophylaxis and what issues drove this policy?

75. With regard to prophylaxis, a distinction must be made between:

- a. prophylaxis provided in the “containment” phase as part of a strategy to gain information about the virus and to the limited extent possible, minimise spread, and
- b. prophylaxis provided on clinical grounds to particular individuals considered to be at high risk of serious illness or death.

76. On the former, during the containment phase, algorithms were developed for the identification of potential cases based on recent travel to affected parts of the world or contact with known or suspected cases within the UK.

Contacts of cases were identified and offered antiviral prophylaxis. This approach was modified to exclude "hot spots" where the virus was already widespread once these started to appear as, at that point, the use of prophylaxis was unlikely to have any meaningful impact on spread.

77. The policy on the latter was determined after extensive discussion by the Pandemic Influenza Clinical and Operational Advisory Group clinical sub-group. The sub-group drew up guidance on the use of antiviral prophylaxis during the swine flu pandemic which was accepted by the Department of Health and published on the Department's website.

What drove the policy on school closures, and how were individual decisions made?

What was the policy on port health inspections, and what issues drove this policy?

What was the policy on travel advice, and what issues drove this policy?

What was the policy on mass gatherings, and what issues drove this policy?

78. The Scientific Pandemic Influenza sub-group on Modelling (SPI-M) had previously given extensive consideration to the potential epidemiological impact on the use of school closures, entry and exit screening, various restrictions on travel and the use of antiviral prophylaxis in households.
79. The operational group of SPI-M (SPI-M-O) reviewed the information emerging about the swine flu pandemic to assess whether there was any indication that the conclusions reached in the pre-pandemic modelling summary on these issues would not remain valid. There was no evidence that this was the case. With regard to travel advice, entry and exit screening and mass gatherings the UK's policy remained as envisaged in the *National Framework for responding to an influenza pandemic*.

5. Treatment

What was the policy on antivirals procurement and distribution, and what factors under-pinned this policy?

Procurement of antivirals

80. Having a stockpile of antivirals has long been part of pandemic preparedness planning, as set out in the *National Framework for responding to an influenza pandemic*. The Government decision to procure antivirals took into consideration the advice of the Scientific Pandemic Influenza advisory committee (SPI) and its predecessor, the Scientific Advisory Group on pandemic influenza (SAG).
81. The purpose of the treatment policy with antiviral medicines is to reduce morbidity, including the duration of symptoms, and mortality. The plan to increase the antiviral stockpile to cover 50% of the population for treatment

was announced by Secretary of State in November 2007. Treasury approval for the staged purchase of antivirals was obtained in December 2008.

82. The stockpile for 50% coverage comprising a total of 23 million Tamiflu treatment courses and 10.5m treatment courses of Relenza was completed in April 2009.
83. On 29 April, the Secretary of State for Health announced, in a statement to the House of Commons, that the antiviral stockpile was to be increased to provide coverage for 80% of the population. This was in order to provide further contingency, although it was recognised that the full stockpile was unlikely to be required for the swine flu pandemic. This involved the procurement of a further 16m treatment courses of Tamiflu.
84. The Scientific Advisory Group on Pandemic Influenza, the Royal Society and the Academy of Medical Sciences advised that it would be preferable to stockpile more than one antiviral medicine in case the pandemic virus developed resistance. Further, it was necessary to stockpile Relenza for those people who had contraindications for Tamiflu. Both Tamiflu and Relenza were shown to be effective against the H1N1 pandemic virus strain.

Distribution strategy

85. At the outbreak of the pandemic, about 80% of the small central stockpile of antivirals held by the Department was distributed to HPUs. This was based upon population densities, prior to the main stockpile becoming available for distribution.
86. During the containment phase the HPA led the response, supported by the NHS in running the Flu Response Centres. Local arrangements were made by the HPUs and PCTs for ensuring that people received antivirals from the stocks that they held including providing deliveries to people's homes and making antivirals available for post exposure prophylaxis to close contacts of probable and confirmed cases of pandemic swine influenza.

The National Pandemic Flu Service

87. The Government had previously recognised that a solely pharmacy-based model for the supply of counter measures in a pandemic, beyond a small and isolated outbreak, would not be sustainable. As a result plans had been put in place for the supply of antivirals to take place through a National Pandemic Flu Service, providing an online and telephone self assessment service to enable large numbers of people to be assessed for pandemic flu and if required authorised antiviral medicines. Using this service has been part of national planning for a pandemic since 2006 and is referenced in the National Framework.
88. The overall objectives of the National Pandemic Flu Service were to:
 - ensure that the right people get the right treatment at the right time, whilst enabling people who had flu to stay at home

- minimise the impact of influenza on the NHS

89. The National Pandemic Flu Service comprised the following components:

- The assessment of a patient's symptoms and their need for antivirals using a clinical algorithm;
- The web and telephony infrastructure to support the assessment and authorisation process;
- The operational arrangements and system functionality required for a nationwide network of Antiviral Collection Points (ACPs) for the issue of antiviral medicines;
- A separate stock management system to monitor stock use and provide stock-pile information centrally;
- Surveillance functionality to provide data on the number of contacts by web and phone, the number of assessments, antiviral medicines authorised and antiviral medicines collected. It also provided valuable data on the number of people advised to contact other healthcare services as part of the assessment.

90. The web and telephony services used a clinical algorithm to assess whether an individual was eligible for treatment with antiviral medicines. The algorithm and associated protocols were developed with advice from a very wide range of clinical experts, including a number of the Royal Colleges, and expert advisers from remote assessment services (NHS Direct). The algorithm was built around national recognised guidelines and expert consensus and included the identification of 'red flag' symptoms indicating a need for urgent 999 referral or GP assessment. The clinical algorithm was part of the national protocol for the authorisation and supply of antiviral medicines, authorised by the Department of Health on behalf of relevant Ministers.

91. People with a sick child under one year old were directed to contact their GP for assessment. At the launch of the NPFS, pregnant women and people with a serious underlying illness were also advised to contact their GP if they became ill with swine flu symptoms, rather than use the NPFS.

Development of the NPFS

92. The contract between NHS Direct and British Telecommunications PLC signed in December 2008 was for the development of the system and web application for the operation of the National Pandemic Flu Service. The development of the system by British Telecom was on track to be delivered by the end of May.

93. At the time of the swine flu outbreak the original build by British Telecom was put on hold so that they could focus on the development of a system to include the functionality required for antiviral collection points (as the original plans for a collection point system were still being finalised) and allow people to access the service without having to know their NHS

number and which could be tested and available to use more quickly if needed. At the time this was referred to as the 'interim system'.

94. This work was completed in May 2009. Increased information about the nature of the virus and further clinical input resulted in changes being made to the clinical algorithm at the beginning of July. The NPFS system was updated to take account of these changes.
95. Plans remained in place for the full National Pandemic Flu Service – based on the original system build by British Telecom plus the system requirements for stock management and the antiviral collection points - to be fully tested and available in the Autumn.

Launch of the NPFS

96. The 'Swine Flu Information Line', which was launched on 1 May, provided pre-recorded information about the outbreak. This took a large proportion of routine calls away from NHS Direct in the period before the NPFS was mobilised.
97. The move to the treatment phase on 2 July 2009 was not used as the trigger for the start of the National Pandemic Flu Service. While the increase in the number of cases meant that the containment strategy was no longer considered appropriate, the pressures on local healthcare services had not reached the point where the NPFS was required
98. The decision to mobilise the NPFS in England was taken by Ministers on 16 July. This was based on the pressures being faced by primary care services in view of the increased number of cases. It then required 7 days to mobilise the service and the National Pandemic Flu Service was launched on 23 July. The other countries retained their ability to implement the NPFS should they need to do so.

Treatment strategy

99. At the time the decision to mobilise the NPFS was made, the evidence base was not in a position to lead to a clear and unequivocal decision on treatment policy (treat all or targeting). The evidence suggested that:
 - antivirals were of most value if given in the first 48 hours after the onset of symptoms,
 - they are of particular benefit to those who were seriously ill,
 - it was not possible to predict with complete accuracy those who would become seriously ill at the onset of illness
 - antiviral drugs had a very good safety profile.
100. A policy that allowed all those with symptoms to receive antivirals maximised the chance that all those who would have otherwise become

seriously ill received antivirals – although this did of course depend on people’s approach to seeking treatment.

101. In the light of this evidence, the precautionary approach adopted in England was that everyone with symptoms of swine flu should be offered antivirals. This policy was continually monitored throughout the pandemic and the NPFS was developed in the following months to be able to support both a treatment for all and a targeted clinical policy should it be required.

What issues drove the different implementation decisions across the Four Nations?

102. Ministers had agreed on 1st July at CCC that, as far as possible, there should be a consistent approach across the UK as to who should receive treatment, while recognising the need for local flexibility. They also agreed that, at least initially in the treatment phase, patient assessment should be carried out by clinicians augmented as necessary locally, with all of the advantages that such a policy provides.

103. They also recognised that there may be a need to activate telephony and web-based patient assessment tools at a later stage of the pandemic, which depended on -

- The level of demand on primary care. This flowed in part from Ministers’ announcements on symptomatic patients’ eligibility for antivirals, and hence public expectations. It also included non-flu workloads and the ‘worried well’ and
- The capacity of primary care.

104. By 16 July, GPs in England were seeing rates of consultation for influenza-like illness (ILI) up to 9 times higher than the seasonal flu average and were in danger of being unable to respond to demand. As a result, in England it was considered that the need for the NPFS and the treat-all strategy had been triggered. The decision to mobilise the National Pandemic Flu Service in England was therefore taken at a CCC meeting on 16 July 2009.

6. Central Government Response

What was the central government machinery and decision-making structure? Did the approach differ from other crises?

What was the rationale for the membership of CCC and CCC(O)?

What was the reason for the introduction of Four Nation Health Ministers meetings? What impact did this have on the response?

What were the expectations on DH as lead department? Did these change over the course of the pandemic?

105. At the start of the pandemic, the Government initiated the civil contingencies co-ordination arrangements (CCC) at both Ministerial and official level. As this was clearly a health incident, the Department of Health acted as lead government department in line with the cabinet office Concept of Operations (CONOPS). The response was led by the Secretary of State for Health, who coordinated the response with other government departments and the Devolved Administrations, supported by the Civil Contingencies Secretariat. SAGE was established to provide scientific advice at a national level to CCC. The government machinery thus operated in the same way as in other crises but with a schedule of meetings to suit the slower burn event of a pandemic.

106. Membership of CCC and CCC(O) comprised all relevant government departments. The Department of Health provided advice on matters primarily relating to clinical policy, the NHS and social care. The HPA also attended to provide advice on epidemiological and health protection response.

107. Health is a devolved responsibility so it was appropriate for implementation to vary across the four countries, but within a UK-wide strategic approach. In recognition of the predominantly health-related nature of the decisions that were required, much of the more detailed work was undertaken by the health ministers of the Four Nations, supported by meetings of officials' from the four health departments and the Civil Contingencies Secretariat. This provided an effective approach to co-ordination and sharing of information.

7. Scientific/Clinical Advice

What scientific advice was available to Government, and how was this presented to Ministers?

Scientific advice

108. The **Scientific Pandemic Influenza Advisory Committee (SPI)** was established in April 2008 to advise the UK Government on scientific matters regarding preparation for an influenza pandemic. There were two plenary meetings of SPI prior to the H1N1 pandemic when advice was provided on stockpiling antiviral medicines and the usage of such a stockpile. The meeting papers have been provided to the Review.

109. The predecessor of SPI, the Scientific Advisory Group on Pandemic Influenza, published five scientific evidence base papers in 2007. These dealt with antivirals, pre-pandemic and pandemic-specific vaccines, antibiotics, facemasks, and the risk of a pandemic originating from an H5N1 virus. These papers reflected a comprehensive and state of the art summary of the evidence as of June 2007.
110. The advice provided by SPI and its predecessor were taken into account in obtaining approvals to move forward with the procurement of countermeasures. This information was also used to inform the approval process required during 2008 prior to finalising the contracts.
111. At the start of the H1N1 pandemic, the **Scientific Advisory Group for Emergencies (SAGE)** was set up, among other things –
- To provide consistent, timely and well-founded advice to the UK Government and Devolved Administrations on scientific matters relating to swine flu and the response to an influenza pandemic through the Ministerial Committee on Civil Contingencies (CCC).
 - To identify where scientific and technical advice is likely to be needed and prioritise and steer efforts as necessary to fill gaps or meet Ministers' needs.
112. SAGE provided advice both written and orally to Government through CCC, with one of the SAGE co-chairs attending CCC meetings.

Clinical advice

113. The **Pandemic Influenza Clinical and Operational group (PICO)** was established in advance of the pandemic to:
- Be the main forum for the provision of specialist advice to the UK Health Departments to inform their response to an influenza pandemic
 - Ensure that UK Health Ministers and Government are provided with timely, high quality expert clinical and operational advice and recommendations, to support the health and social care response to an influenza pandemic in the UK."
114. The role of its clinical sub-group evolved during the pandemic to provide clinical advice to the Department of Health, including advice on the algorithm used by the NPFS, to support the response to and further preparation for the pandemic. The group complemented the scientific advice provided by Scientific Advisory Group for Emergencies (SAGE).
115. PICO's advice was communicated to the NHS directly, for example through the publication of clinical guidelines, and to the Department and Ministers through the Department's Swine Flu Delivery and Operational Boards.

116. The **Joint Committee on Vaccination and Immunisation (JCVI)** is a Standing Advisory Committee first set up in 1963 with statutory responsibilities to advise the Secretary of State for Health and the Welsh Minister in relation to vaccination and immunisation services.
117. JCVI advice on the swine flu vaccination programme, based on the committee's consideration of the available information from epidemiological and mathematical modelling studies, clinical trials, as well as licensing recommendations, has been published. This can be found at: <http://www.dh.gov.uk/ab/jcvi/index.htm>

What was the balance of expertise on SAGE?

118. SAGE was co-chaired by the Government's Chief Scientific Adviser, Professor John Beddington, and the Chair of the Scientific Pandemic Influenza Advisory Committee, Professor Sir Gordon Duff. Information about the expertise that each member brought to SAGE has been provided to the review.
119. SAGE comprised a number of members from SPI together with other experts from a range of disciplines. Depending on the issues under consideration additional experts were invited to attend particular meetings as necessary at the discretion of the Chairs.

How was the relationship between SAGE and JCVI?

120. SAGE's Terms of Reference specifically stated that it should consult and task as appropriate the influenza sub-group of the Joint Committee on Vaccination and Immunisation (JCVI).
121. JCVI considered vaccination in the context of the pre-pandemic as well as the pandemic phase. SAGE and JCVI worked closely throughout the pandemic, with SAGE maintaining an oversight of JCVI's work. In general, given the fast moving situation JCVI would develop statements and advice regarding the vaccination programme. These would then be reviewed and, if appropriate, endorsed by SAGE or further advice offered to inform decisions.
122. On occasions, joint meetings of SAGE and JCVI were held to discuss issues concerning the vaccination strategy. The chair of JCVI was also a member of SAGE, ensuring close liaison. In addition, several members of SAGE are members of the influenza sub-group of JCVI and attended JCVI meetings during the pandemic.

What was the role of PICO in relation to SAGE?

123. The PICO clinical sub-group focused on clinical advice for the Department and the NHS, including review of the clinical algorithm used by NPFS. As such its role was more orientated towards clinical advice rather than policy advice for Ministers.

124. PICO clinical sub-group membership covered both the nursing perspective and a wide range of medical specialities. These included emergency medicine, paediatrics, general and respiratory medicine, intensive care, surgery, obstetrics and gynaecology, general practice, psychiatry and public health to ensure that the full range of medical issues could be addressed as necessary.
125. In order for SAGE to remain a manageable size, and given its different focus, the clinical membership of SAGE was much more limited and did not contain the full range of clinical expertise possessed by PICO. It was therefore possible for the two committees to consider different aspects of an issue (for example, changes to antiviral policy after the end of the second wave in the UK) based on their different competences, resulting in comprehensive advice to Government.
126. While there were some issues where the interests of SAGE and PICO overlapped, each committee had a different focus. SAGE was concerned more with advising Ministers on the science underpinning policy decisions, while PICO was more concerned about the clinical issues affecting patients and the practical implementation of clinical policies (for example, the use of antiviral prophylaxis for those at high risk of serious illness).
127. SAGE was updated about the work of PICO when that work was relevant to issues being considered by SAGE. However, it was not provided with routine updates about other issues (for example, changes to the wording of the NPFS algorithm) given the need to use the time available for SAGE meetings in the most effective way to ensure the best possible advice to Government. However, as the same Secretariat serviced both SAGE and PICO, any questions from either committee about the work of the other were responded to promptly.

What surveillance systems were in place in April across the different countries of the UK, and how did these develop over the course of the pandemic?

128. The aim of surveillance was to ensure that arrangements were in place to be able to provide accurate, timely and reliable information to all partners involved in the response to the pandemic. Prior to the swine flu pandemic, a set of information requirements had been identified for pandemic surveillance which provided a good baseline of information that needed to be collected and reported to partners involved in managing the response.
129. The Department worked in partnership with the Health Protection Agency (HPA) to deliver the necessary information to the NHS, CCC and other agencies to help manage the response.
130. The national surveillance arrangements were broadly aligned with reporting three different types of data that addressed the key policy and public health questions needed to respond to a pandemic in the UK:

- Epidemiology (Activity, spread and clinical impact of the virus)
- Clinical response measures (Distribution, safety and effectiveness)
- Service capacity (Pressures on the health and social care services)

131. The developing nature of our surveillance arrangements had to be taken in context of the pandemic situation as it evolved. The surveillance plans for a pandemic had been built around a broad spectrum of possible pandemic types, so had to be refined as more information became available.

Surveillance strategy: 'containment to treatment'

132. At the start of the pandemic in the UK, the UK Pandemic Alert phases did not allow for flexibility in classifying the spread, impact and response to the pandemic in the UK. Therefore, the Programme relied on the WHO Pandemic Phase classifications. As soon as the pandemic virus reached the UK (WHO Phase 4), there was a rapid increase in the number of confirmed cases.

133. The 'containment' phase included the First Few 100 (FF100) system that collected detailed demographic, exposure, clinical, treatment and outcome data for more than 300 cases of laboratory confirmed pandemic influenza and their close contacts, during the early part of the first pandemic wave.

134. Information was obtained through interviews and record reviews. Virological swabbing was undertaken, when possible, for people with an influenza-like illness and blood samples for serological testing were sought from cases and their contacts. This surveillance system was particularly resource-intensive for the HPA Centre for Infections (CfI) staff, and was operationally supported by the NHS.

135. When recruitment of cases into the FF100 system ended, a refined but detailed dataset continued to be collected via the FluZone system and the Devolved Administrations.

Surveillance strategy during the 'treatment' phase

136. This stage of the pandemic dovetailed with WHO surveillance component 3 - termed 'pandemic monitoring'. The objective was to monitor the spread, activity and impact of the virus across the UK. The HPA and the Department of Health were able to rely largely on the tried and tested seasonal influenza surveillance systems, together with information from the NPFS.

137. Monitoring of the clinical severity and impact of the pandemic virus during the treatment phase was undertaken through the Flu-Clinical Information Network (Flu-CIN) which provided detailed information on hospitalised patients, CMO's Confidential Investigation of swine flu deaths in England and data on hospital admissions.

138. Monitoring of the operational pressures on the NHS was also important element of the surveillance strategy. A number of information systems

were used to monitor operational pressure and response in the NHS in England during the pandemic, both routine and those, such as FLU-CON and SOC-CON which were developed for the pandemic.

139. Data on suspected swine flu deaths in hospitals were collected as part of the daily SitRep to feed into CMO's confidential investigation into swine flu mortality. This included collecting information on the responsible clinician at the time of death to allow follow up enquiries.
140. Further details of the surveillance arrangements in place for the pandemic are set out in papers that have been provided to the Review.

What data were collected and how were they used?

141. Data about the activity and impact of the H1N1 virus and the NHS and operational response were available from a wide range of systems. These included GP sentinel schemes, virological surveillance, NHS Direct, the National Pandemic Flu Service, Flu-CIN, CMO's confidential investigation of swine flu deaths in England, vaccination uptake data etc. In addition the Department received regular reports on NHS pressures including data on number of in-patients as well as pressures on bed capacity, critical care, ambulance services and others.
142. The principal source of knowledge of the nature of the epidemic came from epidemiological modelling informed by the various available sources of surveillance information. The operational subgroup of SPI-M (SPI-M-O) met every week to provide advice to SAGE and the Department. Early on, such analysis was difficult because of the mild nature of the epidemic and because, as it turned out, surveillance information only covered the small fraction (less than 10%) of those infected who sought healthcare. This would not be the case with more severe pandemics such as those of the 20th Century.
143. Despite these challenges, when the mild nature and the unexpectedly high levels of background immunity were properly understood, accurate predictions were made of the extent of the second wave and such predictions continued throughout the second wave (see [Annex B](#)). Throughout the pandemic SPI-M-O produced documentation showing the consensus and advice of the group and their interpretation of the current situation. These documents have been provided to the review.
144. SPI-M-O depended on the input of a number of significant UK academic epidemiological modelling groups. Their input was provided without any contractual arrangement and essentially without financial recompense.
145. UK modelling was also used in ECDC's planning assumptions
146. FF100 and related databases played a key role in identifying important disease parameters, a major success story of the epidemic as there were limited alternative sources for such information.

What was the role of the Standing Committee on Ethics in decision-making?

147. The Committee on Ethical Aspects of Pandemic Influenza was set up in 2006 to advise on the ethical issues arising from an influenza pandemic. As part of its work it developed *The Ethical Framework for Policy and Planning in response to an influenza pandemic*. In addition the Committee has commented on the ethical aspects of issues such as vaccination, antiviral policy and social care during a pandemic as well as the *National Framework for responding to an influenza pandemic* as a whole. CEAPI has also provided a guide to their approach to their work and to the development of the ethical framework. These documents, together with the minutes of meetings, can be found on the Department's website.

148. The Committee reviewed the handling of the ethical dimension of the response at its meetings in May, September and December 2009. On each occasion the committee was satisfied with the actions that had been taken. Between meetings there was regular liaison between the Department and the CEAPI Chair to discuss emerging issues and, where appropriate, the full committee was consulted. Members of CEAPI were also aware that they could raise with the secretariat at any time any concerns they had about ethical aspects of the response. The minutes of CEAPI meetings are published on the Department's website, although the minutes of the December meeting have yet to be included. These minutes are being provided to the review and will be published when the review has concluded.

8. Communications

Who were with key stakeholders identified in April 2009. What arrangements were in place for engaging them, and how did these develop subsequently?

What arrangements were in place or put in place to ensure a consistent set of messages across the four nations?

How were the media and social networks monitored and engaged?

What evidence is there on public responses to the handling of the pandemic?

How was scientific advice communicated to the media and public?

149. In response to requests for advice from SAGE and the Department, the Behaviour and Communication sub-group of the Scientific Pandemic Influenza Advisory Committee provided briefing papers on the following topics:

- a. Offering vaccination and antiviral treatment to targeted groups: impacts and implications for communication;

- b. The impact on public reaction of the term used to describe targeted groups;
- c. Fraudulent use of the 14 day self-certification of sickness absence: likely scale of problem and measures to reduce the problem
- d. School closure policy during the H1N1 pandemic;
- e. Attitudes to being vaccinated against H1N1 (swine flu) implications for communications;
- f. Planning assumptions: communication issues;
- g. Principles of effective communication.

150. These papers were considered by the Department's Communications team when developing its public programme, as was a considerable body of public-facing communications research undertaken by the Department itself. These included opinion tracking and focus groups to develop advertising messages. In practice, a balance had to be struck between the need to respond very quickly to public concerns in a rapidly changing environment and identifying the most effective channels and message types. Nonetheless, public opinion tracking supports the view that overall, the Department's communications were effective, timely and credible.

151. In addition, several recommendations from the SPI Behaviour and Communication sub-group were included in papers provided to CCC.

What evidence is there on clinical responses to the handling of the pandemic?

What evidence is there on the response to the pandemic of other stakeholders?

Communications approach

152. Good, trusted information in an uncertain world is critical to maintaining public confidence. The following principles were used in all communication activities:

Effective planning and research

153. From the very start of our planning and throughout the course of the pandemic the Department's approach to public communications was always one of openness and transparency. We aimed for a proportionate but flexible response and to use a range of channels from the outset. As the pandemic had the potential to affect everyone the use of mass media such as TV, radio and national press was crucial, but targeted channels were also used to reach specific at-risk groups.

154. The Department's communications strategy was informed by public research. In early 2008 UK-wide research was conducted on the likely public response to an influenza pandemic. Follow up research was commissioned to look more specifically at communications. It built on the

findings from the main public engagement research and focused on testing the draft public messages at all WHO phases.

155. In the event plans had to be modified as the outbreak developed differently than the WHO planning model which envisaged six distinct phases. But the Department's communications team mobilised rapidly and we worked closely with the Cabinet Office, the Devolved Administrations, other Government departments and the HPA to deliver a nationally coordinated plan.
156. Early planning and research followed by the public opinion tracker set up in May helped us anticipate how the public would react to specific messages and to understand their anxiety. This guided the Department both in targeting communications channels and in planning messaging as we moved from the containment to the treatment phase. It was essential to get the timing right across national and local channels and professionals and the public.

Following the science

157. CMO led weekly press briefings and this worked well in keeping messages well informed, consistent and establishing trust amongst journalists and the public. This is evidenced by feedback and the public opinion tracker, which has shown that the public have consistently high levels of satisfaction with the information they have received about swine flu – around 80%. The weekly meetings were supported by Ian Dalton, National Director for NHS Flu Resilience, and other senior officials.
158. The Department maintained transparency even when this caused challenges – such as publishing the early planning assumptions which provided a reasonable worst case scenario of 65,000 deaths. This was a significant reduction to the reasonable worst case scenario in the National Framework of 750,000 deaths. Although it was emphasised that reasonable worst case planning assumptions were not predictions, this message was not always understood. When further scientific information enabled these assumptions to be revised to a much smaller figure we had to manage the allegations of over-reaction.
159. At the start of any pandemic there will always be a wide range of unknowns. From a scientific perspective the situation is likely to evolve as a progressive narrowing of the range of possibilities from an initial broad range to a more narrow band of possibilities. The development of the planning assumptions document illustrates this evolution. We recognise that we may need to concentrate less on the 'reasonable worst case' in the pandemic (as opposed to pre-pandemic) planning and more on the expected ranges produced by the modellers (see [Annex B](#)).
160. There is inevitably a tension here between openness, requiring the dissemination of public information as quickly as possible with the need to minimise uncertainty that surrounds such information. For example, considerable efforts were made to communicate what 'reasonable worst case scenarios' were for the purpose of planning assumptions, including

the message that these were not predictions of what would happen, but nevertheless the figures have been misinterpreted in this way.

161. For the future it will be necessary to consider how different stakeholders, including the public, may be helped to understand the meaning and limits of science and scientific advice.
162. The Department worked closely with the HPA and Devolved Administrations to ensure our messages were consistent. We had also to recognise the limitations in individual circumstances – the need to balance the public need to know with maintaining clinical confidentiality, especially with the relatively small number of deaths.

Leaflets/public campaigns

163. An early door-drop to the entire UK population followed by timely and targeted national public health campaigns such as respiratory hand hygiene “catch it, bin it, kill it” allowed us to deliver the message to as wide an audience as possible. All campaigns were shared with DAs in regular meetings are evaluated and VFM is important part of any evaluation.

Working closely with the NHS and Social care community

164. The Department held regular (daily at time of high activity) teleconferences and face-to-face meeting with NHS communicators. Communications materials and toolkits were developed for all key milestones and were available for use across the NHS in England and the DAs. The Department acted as a conduit for any good communications ideas for SHAs and PCTs which were then disseminated to all. This worked particularly well during the leadership-driven staff vaccination campaign.
165. Strategic health authorities played a key part in supporting and coordinating the activities of primary care trusts and other local NHS organisations to deliver locally tailored communications, which were consistent with national messages, and activity. The Department used this same approach to Social Care having a dedicated team to ensure that they too were up to date and included in the front-line workers campaign.
166. Regular, frequent meetings were held between the Department and pharmacy organisations to obtain their full support and co-operation as well as provide feedback from the service about challenges that were being faced.

A national response

167. The Department made it as easy as possible for the public to access information. Our digital response to the pandemic was designed to provide consistent, real-time, authoritative information. This helped support the marketing and media campaigns, raise awareness of and signpost to, the NPFS and monitor the public mood through social media

channels. The Department led this work in collaboration with NHS Choices, Directgov, Business Link, the DAs, COI, and key stakeholders.

168. The Department used a range of digital channels including the core Government online and social media channels, third-party digital channels, paid search marketing and display advertising. All channels were subject to a minimum of weekly - and in many cases, daily - reporting to ensure best value, best practice and consistency.

Fast Response

169. Our real time monitoring of public opinion and close working across the NHS allowed us to pick up on public and NHS professional perceptions. For example, social media played a significant part in our strategy and we monitored the content, tone and frequency of conversations about swine flu, and responded with specific sub-sets of content for specific online audiences, e.g. highlighting content for pregnant women and mothers of the under-fives.

Close working with Stakeholders

170. The Department developed a stakeholder plan to identify main audiences and influencers. A key platform of our communication was to use “trusted voices” working in partnership with third sector organisations, such as the Red Cross and Diabetes UK to help us to spread messages to vulnerable groups. The Department held stakeholder seminars to engage commercial partners and the Third sector plus key OGDs such as DCSF, DCLG and the FCO. A regular newsletter kept all informed.

171. The Department worked with the professional organisations represented by the Social Partnership Forum (including Unison, BMA, the RCN, and the RCM) who supported us via their spokespeople and channels. The staff side chair of the SPF, promoted staff vaccination at our flu conference and the BMA/RCGP/RCN offered to participate in supporting our messages. This helped us in terms of media engagement and opened additional routes to clinical audiences.

International

172. The Department followed WHO leadership throughout the pandemic, and worked closely with the DG and her staff.

173. The GHSI Ministers met three times (once in Mexico) to discuss swine flu during the pandemic. This was supported by regular dialogue between senior officials and pandemic flu specialists. The UK gained useful first-hand information from Mexico, the US and Canada in the early days of the pandemic there and were able to compare approaches on antivirals, vaccines, surveillance and critical care.

174. European Union Ministers also met three times to discuss swine flu. At official level, the Health Security Committee regularly shared national situations, policies and their bases. It was also a major focus of discussion at the World Health Assembly in May 2009.

175. A number of international issues were relevant to our national response, many of which required cross-government coordination. These included travel advice, treatment of foreigners in the UK, advice for pilgrims to the Hajj and for those unable to travel abroad through sickness. Others, such as international assistance, including to our Overseas Territories, are outside the scope of this review.

9. Wider Health Issues

What work was done on preparing for more deaths? How prepared was the system for the impact of a more severe pandemic?

176. The Home Office provides the overall lead on matters relating to the management of excess deaths.

177. Prior to the H1N1 pandemic, as part of pandemic preparedness, the Department of Health had developed plans to relax some of the requirements for death and cremation certification in the event of a pandemic. However, the nature of the H1N1 pandemic meant that it was not necessary to implement these plans.

What work was done on preparing emergency legislation? Was everything necessary in place to enable such legislation, had the pandemic been more severe?

178. Before the swine flu outbreak, the Department had worked to identify the various legal issues that may arise in a pandemic. Details of that work have been set out in a separate paper provided to the Review.

What work was done on sickness certification? Was everything necessary in place to enable necessary changes to be made, in the event of a more severe pandemic?

179. DWP, as the lead Department, had undertaken valuable preparedness work on sickness certification arrangements in advance of the pandemic. During the H1N1 pandemic the Department of Health and DWP worked together to try to determine the point at which it would be appropriate to activate the changes. This needed to take into account both the potential need to reduce burden on primary care and the concerns of industry that any relaxation of legislative requirements might lead to a rise in unauthorised absence from work.

180. Department of Health officials worked closely with both NHS employers (through the Social Partnership Forum), primary care leaders (through PICO) and with industry (through the Business Advisory Network for Flu, set up by the Cabinet Office). In the event the relaxation of requirements was not needed.

Annex A: Swine flu – 2009/10 timeline for key events
See separate document

Annex B

Predicted 2nd Wave Estimates vs Actual Counts (England)					
	Predicted 2nd Wave Lower Estimate	Predicted 2nd Wave Higher Estimate	Predicted 2nd Wave Reasonable Worst Case	Actual 2nd Wave	Total:- 1st and 2nd Waves
GP Consultations	270,000	800,000	1,300,000	299,081	687,147
Hospitalisations	5,900	16,800	29,300	17,390	*
Critical Care Admissions	900	2,500	4,400	1,857	*
Deaths	70	420	840	242	309

* - A single consistent data source for hospitalisations and critical care admissions was not available for most of the first wave of this pandemic"