



CabinetOffice

**REPORT ON UK INTERNATIONAL AVIAN AND PANDEMIC
INFLUENZA STRATEGY WORKSHOP HELD IN LONDON ON
12th MAY 2008**

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Disclaimer:

This report is based on discussion at an international workshop held in London on May 12th 2008. It is not a statement of Government policy.

ABBREVIATIONS

APEC	Asia Pacific Economic Cooperation
ASEAN	Association of South East Asian Nations
BCP	Business Continuity Planning
BRIC	Brazil, Russia, India, and China
BWI	Bretton Woods Institutions (the World Bank and the International Monetary Fund)
DfID	Department for International Development
EID	Emerging Infectious Disease
EMERCOM	Ministry of the Russian Federation for Civil Defence, Emergencies and Elimination of Consequences of Natural Disasters
EU	European Union
FAO	Food and Agricultural Organisation of the United Nations
FSF	Financial Stability Forum
G8	Group of 8 industrialised countries: Australia, Canada, France, Germany, Japan, Russia, United Kingdom, United States of America
G20	Group of 20 countries with fluctuating membership comprising: Argentina, Bolivia, Brazil, Chile, China, Cuba, Ecuador, Egypt, Guatemala, India, Indonesia, Mexico, Nigeria, Pakistan, Paraguay, Peru, Philippines, South Africa, Tanzania, Thailand, Uruguay, Venezuela, Zimbabwe; former members have included Colombia, Costa Rica, El Salvador, and Turkey.
GAP	Global Vaccine Action Plan
GFATM	Global Fund for AIDS, Tuberculosis and Malaria
GHSAG	Global Health Security Action Group: G7 (G8 less Russia) plus Mexico
GISN	Global Influenza Surveillance Network
H5N1 or A/H5N1	The highly pathogenic avian influenza virus type A sub-type H5N1
HPA	Health Protection Agency
HPAI	Highly Pathogenic Avian Influenza
IFRC	International Federation of Red Cross and Red Crescent Societies
IHR	International Health Regulations
IMF	International Monetary Fund

IPAPI	International Partnership on Avian and Pandemic Influenza
LSHTM	London School of Hygiene and Tropical Medicine
MBDS	Mekong Basin Disease Surveillance
MFA	Ministry of Foreign Affairs
NGO	Non-Governmental Organisation
NIBSC	National Institute for Biological Standards and Control
NIMR	National Institute for Medical Research
UN OCHA	United Nations Office for the Coordination of Humanitarian Affairs
OECD	Organisation for Economic Cooperation and Development
OiE	World Organisation for Animal Health (Office international des épizooties)
UNHQ	United Nations Headquarters
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
UN SG	United Nations Secretary General
UNSIC	United Nations System Influenza Coordinator
VBD	Vector Borne Disease
WFP	World Food Programme
WHO	World Health Organisation

SUMMARY

Consistency and interoperability of plans remain a significant problem. There is a need to improve coverage of non-health issues by cross-sectoral plans. It would be useful if country plans were at least regionally translated into a common language. Joint training, sharing of plans and their underlying evidence, and joint exercises among small groups of countries would all help to build trust and knowledge. Good use should be made of the International Health Regulations. There is a case for more work to improve generic capacity building, and a need for plans to be operational at community level.

On business continuity planning, there is much to learn from the multinational organisations, and scope to encourage all organisations to consider how they will deliver on their obligations. There is a general need to develop and sustain a culture of preparedness. Cross-sectoral stability fora in essential fields including energy, food, telecommunications, internet, finance are feasible. There is a case for encouraging these, including through official communiqués.

On the major international challenges and follow-up to the New Delhi Road Map, there is a strong case for a holistic approach to pandemic planning which could deliver generic benefits to disaster management, and for making rapid outbreak reporting culturally honourable. Peer review is helpful if it can work voluntarily. The legitimacy of the New Delhi Road Map needs to be strengthened.

On the priority functions of the international organisations and the next steps, commitment and funding should not decline. UN bodies have an important oversight role in addressing issues of pandemic plan interoperability and by organising exercises including tests of the rapid response and containment protocol. There remains a need for effective coordination, particularly in regions, where the various UN bodies need to work more efficiently and effectively together in countries and with NGOs. Depending on the appropriate balance between generic and disease-specific planning, extending avian and pandemic influenza preparedness to include new emerging infectious diseases could risk diluting its focus.

On the UK's potential role, this should be built around using leadership by example through varied partnerships and country groupings. We should share best practice in pandemic planning, including technical (science, research, modelling), humanitarian and disaster-management expertise, and promote global dialogue between the regional organisations. We should sustain the scope to address both avian and pandemic influenza; and continue to address issues of global virus sample-sharing and benefit distribution, and of capacity-building and development assistance in developing countries. We should support ways to make country plans operational, particularly at the community level, and should promote inter-sectoral approaches to pandemic planning.

Cabinet Office,
London, UK.
20th June 2008.

SECTION A.

PREPARING FOR PANDEMIC AS A GLOBAL THREAT: HOW TO ENCOURAGE CONSISTENCY AND INTER-OPERABILITY OF PLANS ACROSS NATIONAL BORDERS?

- 1 To what degree does the lack of transparency about countries planned actions during a pandemic lead to inconsistency and lack of inter-operability between countries?**
 - **To what extent can this challenge be resolved through regional plans, tested in exercises, with attention to border controls, consistency in policy communication, resilience of supply chains, screening, quarantine, travel and transport restrictions; and if so who might do this and how?**
 - **What more can be done in international forums or organisations to achieve consensus on an optimal approach to plan interoperability - including procedures for handling border closures?**

Transparency and interoperability

1. Interoperability of plans is an issue for all, but of special concern in countries which could be close to the epicentre of a pandemic. One obstacle is that few plans have been translated into other languages. Practical solutions could include joint desktop simulation training with a few neighbours. If this were successful then the idea could be extended to others in the region.
2. G8 fora have enabled greater mutual understanding of plans and their differences among members. Countries require mutual trust to work together and to share commercially or politically sensitive information. Trust takes time to build. Lack of transparency often arises from a lack of political consensus or where an issue has not been decided. Where an issue has been decided then transparency is relatively simple. Even G8 discussions require high levels of work to begin.
3. G8 meetings can deliver big benefits. Global Health Security Action Group (GHSAG, the G7 plus Mexico) discussions have enabled plan sharing. The problem has not been lack of transparency but of time, given other priorities. Great benefits have been obtained not only through sharing plans, but also by discussing and testing the bases behind the decisions, such as in the GHSAG workshop on border and associated issues. Plans generally cover public health, security and economic stability but fail to prioritise explicitly among these goals. It can often prove politically challenging to be explicit on the rationale behind policies. UK strategy development should explore their rationales and purposes rather than just their contents.

4. The GHSAG pandemic preparedness policy surveys have been outstanding in pointing out to countries the policy gaps in major areas, and in revealing differences among countries including neighbours. Their value is particularly strong in that they have been undertaken by countries themselves rather than by external groups, and therefore seem more likely to lead on to internal policy development and cooperation. They could be varied to suit regional application though working to a roughly common template. However, a problem is that pandemic preparedness is now so large and complex that a complete template would be huge. A “bite-sized” approach is best.
5. Some have found that countries are reluctant to divulge plans where these are neither comprehensive nor operational, including for security reasons. There is a general willingness to learn lessons from each other; and exercises really do open eyes. Regional sharing of knowledge is valuable. The inter-dependences are such that no global organisation can work effectively in isolation from others.
6. Developing countries generally are addressing pandemic planning issues while facing many other higher priorities. On transparency, a central issue is ensuring this during a pandemic itself rather than just in preparation for one: information-sharing in a pandemic should be part of the plans.
7. A current perceived threat is the waning of international interest in pandemic issues. There will be further funding pledges at Cairo in October but the level of global support is unclear. The issue of interoperability between country plans is linked to wider planning motivations. Interoperability is a means to an end, not an end in itself. Some countries are taking an all-hazards approach to risk assessment and therefore generic contingency planning applicable to varied threats. The International Partnership on Avian and Pandemic Influenza (IPAPI) has now to demonstrate its broader value. Exercises deliver many benefits. However, there remain wider political uncertainties.
8. Interoperability issues challenge the relationships between the constituent states of federal systems. Capacity constraints are complicating the regional inter-governmental mechanisms. Hence for resource-poor countries the aim should be to deliver generic capacity building for disaster preparedness broadly, including pandemics and other hazards.

Exercises

9. There is potential value in a global and systematic approach to learning lessons from exercises, including the analysis of public health legislation.
10. Exercises ensure that the issues arising enter a time-line for policy development. There have been several EU exercises. It would be feasible – but a big step - to adapt these to more international settings. Many private sector businesses have issued antivirals to employees because they are aware that minimising the effects of a pandemic will confer competitive advantage.

Interdependencies

11. The issues around pandemic preparedness were initially seen as essentially technical, but are now much more political. Cross-sectoral engagement has increased as the paradigm for pandemic planning has shifted. In some cases, funding which was initially put in to public health is being redirected to non-health sector preparedness.
12. Setting aside the feasibility of pandemic containment, it is not clear that a trade-off exists between the resources going in to health and the maintenance of economic stability. In most countries, the critical sectors in interdependent networks have not planned for operational continuity in a pandemic. The countries affected by SARS have put in a lot of effort to pandemic planning but even then they have arguably tended to focus on the health sector.
13. Most large multi-national private sector companies are significantly ahead. Global financial institutions have also been involved. Nevertheless there is a distinct lack of transparency in the business community. The challenge is how to stimulate inexpensive “quick wins” and learn some of the lessons from the private sector.
14. There are several global supply chains where cross-border issues are critical e.g. fuel and food. It might be possible to bring together a group of countries representing the big systemic players and suppliers. This is currently happening in international finance, in which regulators and supervisors meet regularly (often monthly) by teleconference to compare their activities. Perhaps there is a need for specialised sector-based gatherings in fuel and food distribution and in telecommunications.

The current multilateral institutional architecture

15. The new International Health Regulations (IHR) should be maximally exploited, preferably by Member States pressing WHO to use them to demonstrate their impact. There has already been good collaboration between WHO, FAO and OIE in East Africa and the Sudan over Rift Valley Fever, which affected animal trade. The organisations worked together to elicit reports from the relevant Government departments to all IHR focal points; and this enabled the agencies to produce joint reports. The IHR could also be valuable in addressing the issue of virus sample-sharing, but would require interpreting with that end in mind.
16. It has not been easy working within the current multilateral system but there have been successes e.g. in delivering anti-viral stockpiles for ASEAN and for WHO in the case of a change to pandemic alert phase IV, and in forming a multilateral framework for a vaccine stockpile. However the debate on virus sample-sharing shows some of the challenges involved. Regional IPAPI discussions in this respect have been useful.

17. The current “soft” international architecture has arisen because there are many explicitly political as distinct from technical issues, e.g. prioritising among varied outcomes and investment options. The underlying idea was that the international organisations could offer technical guidance, but could not decide political issues requiring inter-governmental negotiation likely to take some time to deliver any results e.g. on stockpiles and the prioritisation of access to them. The IPAPI could, therefore, debate these issues separately from the international organisations. However this has not worked in practice.

Regional tier activity

18. Currently there is no obvious formal inter-governmental mechanism with the level of trust required to resolve these issues. There is an inherent tension between the multilateral system and smaller regional fora, with their respective strengths and weaknesses.
19. There have been examples of strong analytical work, e.g. the APEC’s project on Functioning Economies in a Time of Pandemic, although it is unclear how governments will in practice operate. The grouping Mexico-USA-Canada has worked well on cross-border issues. The forthcoming French Presidency of the EU will address this issue later in 2008. In other respects, ASEAN and APEC could be more effective. Central America and Africa may not be able yet to rely on regional processes. There is not yet the right forum or venue for handling these issues.
20. The joint UNSIC and World Bank global progress reports show preparedness variation across countries. There is a case that the focus of efforts should be with the weakest in terms of resources and capacity, given that the global response is as weak as the weakest link. The World Tourism Organisation has achieved much at regional level; and others could learn a great deal from this.

Planning for prevention

21. The large sums currently being used on anti-viral stocks may not always deliver value for money. It is theoretically possible that greater marginal gains may result from investing in measures to prevent influenza at its source in animals, particularly in resource-poor countries.

- 2 To what extent does variability in the quality and usefulness of national influenza pandemic plans result from plans not being based on a common and agreed scientific evidence base on biomedical, social and economic issues? If so,**
- **How could global agreement on the science base and its use in policy-making be achieved so as to encourage consistency and inter-operability of plans?**
 - **To what extent can such an approach help to reduce inter-country tensions (around foreign, trade and humanitarian policies) or unnecessary coercive activity in the event of a pandemic?**

Gaps in science and its use in policy

22. Existing gaps in the science base are many and need bridging. Is there scope for a global science strategy? Science always requires judgement. The media will inevitably pick up on this point e.g. by asking why country A recommends and provides face masks for the public while country B rejects this option given the same evidence base.
23. Countries vary in the extent to which they plan on the basis of a range of possibilities versus apparently central tendencies. The fundamental question is what should be done with the available science.
24. To an extent this depends on the differing relations between scientific thinking and policy development in countries where a number of models can be viewed. These include:
- Science determining policies (which rightly never happens except theoretically).
 - Science informing policies (the UK model).
 - Science being used to justify pre-determined or cultural policies.
 - Science-free policies (including independent scientific activities in countries).
25. National mechanisms which take the second approach are quite uncommon. While it would be important to achieve scientific consensus, this could have less effect on policies than might be imagined. Although science is useful in framing the direction of travel, policy outcomes are shaped by the political environment more often than not. It is important to realise just how much of the science remains to be determined even in quite basic areas e.g. the relative contributions of the various modes of influenza transmission. That is why a global consensus on research priorities, attending to some of these more simple and practical issues, could be helpful.

Modelling

26. The same scientific evidence can be interpreted to justify different plans, e.g. in the case of policy on face masks. Some countries have used modelling extensively to analyse policy options. Countries vary greatly in how they present and explain their planning assumptions, even though there may not be marked differences among the assumptions themselves e.g. on worker absenteeism.
27. Modelling poses specific challenges in that the output is determined by model design and assumed parameter values with variable empirical support. There is therefore arguably not a strong case for a global modelling group. Scientists need to be inventive. Policy-makers should decide what is good for their countries. Examples can be given of countries using different models e.g. of classical swine fever designed so as to justify and deliver desired policy options.
28. Vulnerability is hard to predict from modelling. Security considerations and interdependencies vary. The approximately 170 national plans available to one international organisation fall into three broad categories: good on avian influenza only; good on both avian influenza and human health; and holistic plans applying across sectors.
29. It would be useful to understand the drivers underlying these three groups of plans. Exercises can also help e.g. the December 2007 Mombassa Corridor exercise delivering assistance through Kenya to 7 neighbouring countries showed that fuel was the critical limiting factor. There is no UN system mechanism for addressing fuel / energy supplies. There is a need to examine and address such interdependencies, including at the community-level.

Some issues cannot be decided purely on scientific grounds

30. Some countries have found it hard to plan purely on a narrow science base. Prioritising population sub-groups for vaccination on grounds of job importance, relative risk of death or relative risk of infection is the kind of issue which cannot be decided purely by science. Some argue that planning is already too strongly based on medical resources. Perhaps the relevant international organisations could devise specialist guidance for governments needing to address these issues in a legislative context.

3 Modifications to some international regulations might facilitate the response to a pandemic and reduce social and/or economic disruption. This possibility needs an international analysis.

- **What plans are there to examine legislation affecting business internationally; for example if a financial (or other business) institution wants to move its operations around the globe as the pandemic moves, what regulatory limitations are there to doing this and are regulators working jointly to consider this?**

31. Regulations have to date worked well in recent HPAI outbreaks. The challenge is the fear of economic consequences, for example of sanctions on the poultry trade. Early notification is critical for public health. The tendency has been to await absolute test confirmation of outbreaks before advising public health authorities. There is also a fear of over-reaction by public health authorities. More discussion is needed of people's "paradigms" in this context.
32. The 2007 Mombassa Corridor exercise has helped to highlight and understand which facilities would be kept closed or opened, and their implications for transport. Agreement among the main private sector actors is needed on relevant elements of maritime legislation, which itself needs to be brought up to date and is not currently using WHO's pandemic guidance. Clearer messaging and co-operation is also needed between the private sector and technical bodies as firms tend to look to "official views", largely from the WHO.
33. Social as well as humanitarian impact needs to be considered. About 50% UN System personnel are peace-keepers. Some legislation may be required to address the needs of such peace-keepers and of global trading routes in a pandemic.
34. The security and operational capacity of humanitarian personnel are critical to fulfilling their functions. Clear guidance is needed on scope and conditions for NGO movement and issues around the evacuation of foreign nationals.

SECTION B.

LOOKING AHEAD 3-5 YEARS: WHAT ARE THE MAJOR CHALLENGES FACING INDIVIDUAL COUNTRIES AND THE INTERNATIONAL COMMUNITY? HOW SHOULD THE NEW DELHI ROAD MAP EVOLVE TO FOCUS ON THESE CHALLENGES?

- 4. There has been a tendency to focus on biomedical and social measures to address pandemic containment and mitigation needs, but less attention to the validity and variation of planning assumptions about pandemic social and economic behaviour.**
 - **How to ensure that the New Delhi Road Map adequately addresses socio-economic elements of pandemic preparedness?**
 - **Are there any technical issues covered by the road map, e.g. vaccination, communications messages, methods of safe culling, where further work is needed appropriate for resource-poor countries?**
 - **Who should take forward work on such technical issues as appropriate for resource-poor countries?**

Feasibility of HPAI eradication and control in birds

35. Critical issues centre on funding priorities and their links to risk assessment and to investing in approaches of questionable feasibility.
36. The feeling in New Delhi was that many epizootics could be controlled, but now there is a sense that this battle has been lost. So, the strategy may no longer be valid especially as food is becoming a major problem. Perhaps preparedness should be re-orientated.
37. The problem in some parts of the developing world is that H5N1 containment is not successful, as e.g. in Indonesia and Bangladesh. Relatively little global funding has been put in to countries with enzootic HPAI despite explicit eradication policies. The question is whether a change in strategy will deliver a shift in funding.
38. Veterinary services for HPAI in many countries are weak, hence current international efforts to evaluate and up-grade them. One cannot simply order a country to change. For example, there are 330 or so Districts in Indonesia so there cannot easily be a country-wide vaccination programme. The Indonesian Government has no links to industry in this respect. In Bangladesh there are some such links.
39. Culling is also a challenge: if one cannot cull, then the greater logistical needs make it difficult to vaccinate. Vietnam provides an instance of viral resurgence. In Indonesia, several H5N1 strains are circulating without a matching vaccine available. However there is a need to consider the success stories too in the run up to the next inter-ministerial meeting in Cairo in October 2008.

40. In some cases, there is a need to change the “paradigm” or attitude from one which seeks to preserve ancient household or Sector 4 poultry-rearing traditions (which can go back several millennia, for example in Egypt) to an approach more attuned to contemporary bio-security needs. Rapid or sudden changes of this kind may not be feasible. In Vietnam, live markets are prohibited in Hanoi but poultry can still seem to be very evident; and reality is only slowly catching up. There is a need for realism on resource-poor countries, greater transparency, and closer collaboration between animal and human health sectors over the long term.
41. The realism of different possible visions for HPAI – eradication, detection and control, understanding and tracking – still remains open to debate.
42. It is important to keep in mind that eradication of animal influenza viruses is not always possible for socio-economic reasons including the problems of sector restructuring. To ban poultry raising will simply drive more such activity below ground. Backyard poultry is unlikely to be problematic. The challenge lies mainly with mobile traders and small enterprises: measures are needed which would not force them out of business. In some places, poultry farms may often be 100% infected and left uncleaned. Much can be gained without industry restructuring.
43. The problem of sustaining action against HPAI in certain countries may result from three factors: (i) middle-level commercial producers holding around 1,000-5,000 birds in non-bio-secure facilities; (ii) highly decentralised governments in which officials are unable to implement plans likely to alienate the poultry producers on whom they may depend for their jobs; and (iii) the difficulty of routing funds through Government budgets for fear of effects of corruption or bad governance.
44. Culling methods in the UK have been assessed by the Health Protection Agency and relevant public health advice has been given. This approach could falter if any cullers catch HPAI. The UK needs to plan accordingly including legislation for “ventilation shut-down” in poultry houses so as to enable “remote” culling without personnel.

Veterinary surveillance and laboratory standards

45. It would be easy to ask for more regulation and surveillance, but some incentives are needed e.g. cash to enable better sampling so as to include other livestock species and also wildlife species. Some international organisations are collaborating on test kits for this end, which in the long term should deliver better surveillance.
46. There has been a substantial number of veterinary laboratory evaluations against international standards. This approach needs medium-longer term funding. In some countries the veterinary service standards are very weak. Evaluative assessments need to be well used.

47. Some current bilateral funding for disease surveillance and response in Indonesia is being evaluated. One lesson from wider experience is that control is possible if countries react sufficiently quickly; but there are substantial long-term limitations. The experience in Indonesia underlines the point that dealing with enzootic HPAI alone does not necessarily address the persisting pandemic threat and the need to prepare for it.

Reporting incentives in animal and human health systems

48. When revising the International Health Regulations, it was recognised that there were disincentives to report outbreaks. Hence the IHR were altered so as to change the norm for reporting to one which would encourage “good neighbourly behaviour”. This has led to improvements. Countries are now reporting human cases of H5N1 without too much delay. This experience could be used to change the paradigm as zoonoses are often first identified in people when the real need is to identify them in animals before they infect people. A UN Secretary General or someone else could perhaps give impetus to this through the “One World, One Health” concept.
49. Outbreak reporting has tended to be passive. The World Health Assembly has accepted outbreak tracking. A country can now be approached actively for information.
50. Communications tend to have focused on pandemic risks; but survey data suggest that levels of awareness in some areas are such that, for example, 30% farmers may not have heard of HPAI.
51. Although the IHR have helped reporting, the information supplied to WHO has to be validated with evidence. Bilateral discussions with the affected country are then needed before any next steps are taken in response. This process depends on WHO and the Director General. Only Member States can request action. Countries will accept some type of coordinated response but the initial aim is to take this action before international spread. More collaboration is needed to strengthen the core capacities.

Availability and use of international expertise including in resource-poor countries

52. More needs to be done to bridge the divide between the actions taken by countries and the advice given by international organisations. Some countries reject advice or assistance from international organisations, which have no alternative but to respect their wishes. There can be no unrequested interventions.
53. International organisations could perhaps take forward such technical work in resource-poor countries. The revision of WHO's guidance – which has perhaps been delayed in part by work on virus sample-sharing – may provide an opportunity for this.

Operational status of plans

54. It is important to distinguish between “aspirational” and operational plans. The biggest challenge is to have actual operational plans in place locally, nationally and internationally. Most important is the community level. This is difficult even for the health sector. It is all the more difficult for decentralised countries, resulting in substantial interoperability problems including those arising from constraints on capacity.
55. Time zone differences and non-health sector business cycle variations can also pose challenges in determining who talks to whom about what issue when; e.g. if conference calls with WHO were impracticable for these reasons then another part of the UN system would perhaps be needed to take the lead. This is an issue for the operational status of international plans.

- 5. International Organisations play a critical role in determining and delivering a coordinated global pandemic strategy. There is a concept of operations for ways in which elements of the United Nations System will work in the event of a pandemic.**
 - **Should the road map for 2011-2013 specify the roles and responsibilities of the international Organisations during the next five years, and how they will operate together during a pandemic?**
 - **Should the road map include the role the NGO's, the Red Cross, and Industry will take; and if so how?**

International systems, roles and responsibilities

56. The international system has made strong progress against influenza compared to some other threats. There has been good, well-funded and concerted work on the basis of the global strategy agreed in 2005. National governments have backed this approach regionally and globally. Progress reports indicate that most countries have responded well to the challenge.
57. There has been an unusual degree of cooperation among the various elements of the international institutional architecture including on standards and technical assistance.
58. The current climate of waning media interest creates a challenge for poor countries to focus on pandemic planning especially in Africa where many countries have not experienced HPAI. There is a need to articulate more effectively the generic benefits of pandemic planning for wider resilience, emergency management plans and structures.
59. The international community has a clear role in providing guidance on what resource-poor countries should do, and in making available resources to support this.

UN System concept of operations in a pandemic

60. The UN System Concept of Operations provides a framework defining ways in which all parts of the UN System should collaborate during an influenza pandemic. It is probably not as operationally feasible as it needs to be. Consensus on this is currently being built among the varied elements of the UN System. A table-top exercise in June, followed by a planning exercise involving the humanitarian / NGO sector in September, will help to identify roles and responsibilities.
61. It would be useful to apply this approach at the regional level after the table-top exercise; and one specialised UN organisation will involve regional structures and national IHR focal points in the June exercise. There is scope to bring in other non-UN system organisations e.g. the international financial institutions. The September exercise will highlight the coordination problem across partners with civil society including industry. The local communities will be the most severely affected. If there is a revised New Delhi Road Map, this should capture the role of civil society which has a critical role when mainstream services are overwhelmed.

Capability of international organisations to act

62. There is a general sense that reducing the likelihood of a pandemic requires the richer North to provide money and the poorer South to act. The New Delhi Road Map tends to address non-health sector pandemic preparedness rather as an after-thought. Pandemic preparedness should surely not be a North / South issue, given that its externalities will affect billions of people. So it is important to ask how long-lasting will be the effects of a pandemic, and what impact the international organisations can be anticipated to have.
63. The international organisations require mandates to act. Their Member States must instruct them what to do. HPAI is no longer on the agenda of at least one such organisation, whereas climate change and other issues are now prominent. If the issue is not in the relevant communiqué from Member States then it will disappear from an organisation's agenda altogether. This applies both to UN system and other international organisations.

The status of the Road Map and its implications for holding governments to account

64. The New Delhi Road Map has no real status and should preferably be linked to a more legitimate instrument / mechanism. It would be difficult to introduce peer review and to identify which countries were below a quality threshold. It is difficult to call governments to account, which could simply induce anger and lack of cooperation, while quiet diplomacy can enable countries to escape. Regular reviews and some form of accountability are needed.

65. The New Delhi Road Map has been useful but does not sufficiently reflect the concerns of the humanitarian community. The question here is how to get governments to link in to their other commitments e.g. the Hyogo Framework for Action, and so bridge the various silos in which they tend to work.
66. Logistical weaknesses should not be allowed to wreck the response to a pandemic killing 50 million people. A major challenge for the humanitarian community is being able to work with national counterparts. The question is how to support governments in their disaster management planning. Parallel missions from varied international organisations are confusing for recipient countries. In this, the UN System needs more careful internal reflection and planning.
67. The New Delhi Road Map was proposed by the Government of India and as such is not a negotiating document. It is possible that governments might wish to vote on it at Cairo. A good aspect of the “soft international architecture” of the IPAPI is that it does not get into such negotiation issues, and so is unlike the UN General Assembly in that respect. There is a problem of disconnection when there is waning media interest but some governments sustain engagement in the issues as a means to an end. However, it is not clear how international organisations can do this when the role of e.g. the WHO is not to plan for threats. The issues are far wider than health. The UN Security Council also does not do such planning.
68. If media interest declines then the roles of the international organisations need to be considered carefully. The current crisis in Burma and related activity along the Thai border indicate the need for better governance among international organisations. If the IHRs are to enhance governance, then it is topical to ask what more the international community can or should do. Perhaps there could be an “IHR Watch”, modelled on the NGO “Human Rights Watch”, so as to hold governments to account.
69. Doubt about the legitimacy of the New Delhi Road Map is a disadvantage. Given its comprehensive scope, a challenge is how to introduce it into those decision-making processes which could create responsibilities for governments. The Road Map is so broad that it is hard to discern the priorities for resource-poor countries.
70. The New Delhi Road Map does not address the virus sample-sharing issue. The question here is about how to secure collective benefits rather than nation-by-nation responsibilities. It is difficult to reintroduce the concept of global public goods – which was subject to lively debate some years ago - but it needs discussion again in this context.
71. Pandemic preparedness can be seen as a means to an end, and an opportunity to improve governance. Some steps in this can be made though IHR implementation. There could be a forum for sharing best practice in governance in more decentralised countries, including on animal health.

72. The easy answer to both questions about the Road Map is “Yes”. The difficult part is to turn these answers into reality. For example, it is not clear to whom the GHSAG 8 countries are accountable: would this be to the World Health Assembly, or to the UN General Assembly?

Cross-cutting and non-health sector fora

73. The various sector bodies have been established more or less serendipitously over time rather than as a result of systematic and collective global decisions. The current food crisis may take the more rigorous approach further.
74. Another question for the long term is how to compensate for the extraordinary losses which could arise in some sectors.
75. There is a pressing need for pandemic preparedness planning to pay more attention to cross-cutting and non-health sectors – fuel / energy, financial stability, food, the internet, telecommunications. The Basel Financial Stability Forum is an example. Similar fora are arguably needed for fuel / energy and food so that pandemic influenza can be on their agendas. This will stimulate more business continuity planning, which is essential if there is to be serious attention to a pandemic.
76. The Financial Stability Forum formally comprises governments and is based in the Bank for International Settlements. There are regular targeted and flexible meetings with banks, regulators, and other stakeholders. The financial services sector and the travel / tourism sector have well-developed pandemic plans but other sectors do not. This needs to change.
77. The Foreign Policy and Global Health initiative was established in 2007 by seven countries (Norway, France, Brazil, Indonesia, Senegal, South Africa, Thailand) to highlight the importance of applying foreign policy thinking to health issues including security, cross-border challenges and HPAI. Participants are considering how to use this network in varied negotiations including those on intellectual property right issues and matters of specifically political concern. A major goal to achieve in this is mutual trust.
78. The international organisations could usefully now document their achievements, including those of nations and the wider community. There has been a considerable consensus around avian and pandemic influenza, and much has been achieved through partnerships and synergies. Yet many countries are actively questioned about why they are still working on it. Such a summary of achievements could help to sustain governments’ enthusiasm.

6. International organisations provide science-based standards, guidelines and recommendations and issues policy advice, strategy design and technical assistance for the control and eradication of avian influenza.

- **Should the road map address zoonotic or emerging infectious diseases more explicitly, or should it use pandemic and avian influenza emergency management as a paradigm for other zoonoses or emerging infections?**
- **Should the road map include a peer review mechanism?**

79. The H5N1 virus has enabled massive resource mobilisation but it is unclear whether this will answer longer term questions, and what importance should be given to H7 and H9 virus types. Perhaps the current global strategy has been too H5-centred and insufficiently generic.

80. International organisations have a risk assessment responsibility. There is a major gap between the risk perceptions of different parties. Credible international authorities are needed to pronounce on the risks. Many people have learned to live with H5N1 in Indonesia, hence the need for better risk assessment and communication.

81. On peer review, OECD members form groups of peers for purposes including review of development assistance. Countries could invite peer review of their own plans. Taking the initiative would itself send a signal. This does not require a mandate.

82. A revised Road Map should arguably include a peer-review mechanism. However, this may be more effectively achieved initially by discreet action between “consenting adults”, as with the GHSAG survey, although set to a common paradigm.

SECTION C.

WHAT ARE THE PRIORITY FUNCTIONS OF INTERNATIONAL ORGANISATIONS AND HOW CAN THESE BEST BE FRAMED AS WE MOVE FORWARD TO AND BEYOND THE OCTOBER INTER-GOVERNMENTAL MEETING IN CAIRO?

- 7. How best can national authorities and international organisations - in today's dynamic mix of interacting networks - collaborate so that they (a) identify priorities, (b) coordinate action, and (c) regulate systems which are likely to be affected by pandemic conditions. In particular**
- **How can the international players ensure security of essential services, supplies and communications infrastructure across sectors in a global pandemic?**
 - **What efforts are being or should be made to ensure that advice to international business organisations is consistent?**

Approaches to planning for specific and generic risks

83. It is important to ask what are the risks. GHSAG have been discussing this. A UN body e.g. UNSIC can determine the risks and why these exist. Pandemic planning is important because it addresses critical security issues; but perhaps it can also address risks of weather, terrorism etc. Pandemic influenza is unique in that it is a global phenomenon, and affects people not buildings. Planning is a means to an end: all risks need to be considered for their generic significance as e.g. in certain countries' planning for identifiable "top risks". It would be good if the UN System could also think about these.
84. Pandemic influenza planning can focus on generic relevance to other risks. The open and unclassified status of preparedness plans can be an important aspect of this. Preparedness must continue in the absence of media interest, just as defence systems are sustained without media coverage.
85. Health security is about getting drugs and vaccines to people; and others look for collective risk reduction. Defence ministries need to understand the public health issue. It is a measure of success for relevant international organisations when ministries of defence invest in health. It is important first that the issue is one of public health. GHSAG took an important step when moving from bio-terrorism to pandemic influenza.
86. There is a need for a generic plan. Pandemic planning is good at delivering this. By achieving a pandemic plan far greater things have also been achieved. Recent international threat assessments indicate the importance of borders, contact tracing, early detection and reporting, the IHR, and the response. It is important to sustain the momentum with a cross-sectoral approach. It would be helpful if someone could facilitate this across the six thematic non-health areas / sectors; e.g. transport "belly" cargo accounts for about 30% food imports in one major Western country.

87. There are varied perspectives on linking up public health plans with bio-defence. There may be a case for wanting narrowly defined threats not broad public health threats. Different institutional cultures can mean that talk of increasing animal and human health elements is greeted with astonishment and lack of understanding.
88. Scenarios of terrorist threats and avian / pandemic influenza have revived interest in contingency planning. We need to accept the idea of “a culture of preparedness” which is sustainable even without funding i.e. as of more than long-term importance.

Business Continuity Planning across sectors

89. The advice to businesses is a neglected area although there are good efforts in the places under the IHR banner. It could be made clearer who should be speaking to businesses: the countries in which businesses have their HQs or those where they are most active; and it is unclear which should be the international organisations.
90. The civil society role in Business Continuity Planning (BCP) is striking in some countries e.g. the Japanese Red Cross contributes through 130 hospitals and is also important in Ethiopia. It is not possible to ensure these activities without BCP.
91. Clarity in definitions can help. BCP is about external threats to internal operations. Contingency planning is about delivering services. Pandemic preparedness planning is specific to pandemics. Hence, a common vocabulary is desirable.
92. It is hard to work across sectors. In some cases, the health ministry talks to WHO; the agriculture ministry to FAO/OIE; the finance ministry to IMF; and the MFA to UNHQ. This can result in a continuing coordination problem where no-one really knows the whole UN System.
93. BCP can be relatively cheap. It is important both for pandemics and for other forms of disruptive challenge. Pandemic planning affects both employees and facilities. The financial sector authorities of those countries which are strongest in this part of the economy find it useful to discuss risks to stability on a regular basis. A pandemic may result in big falls in economic activity. One cannot presume that poorer countries will be more harmed by a pandemic than richer ones which may be more exposed to vulnerable inter-dependencies.
94. Fuel/power, food, finance, transport, telecommunications, the internet: these are the six major international networks or inter-dependencies. Groups like the Financial Stability Forum (FSF) could enhance both information sharing and handling of cross-border including regulatory issues. The international organisations are at their Member States' disposal. However, at least one such organisation would need a G7 shareholders' communiqué of instructions to management in order to sustain its engagement in pandemic preparedness planning activity.

95. Do G7 governments want a communiqué calling on the World Bank and other institutions to look at sector activity fora modelled on the FSF? The Bretton Wood Institutions could then think this through in the proper context, which is important from the non-health standpoint. Such fora should probably be sector-based and tasked to look at pandemic issues as a priority. Food and fuel security fora might get political impetus sooner than other fields.
96. The FSF-like approach has potential. Perhaps Cairo could be an opportunity to raise the need to focus on neighbouring countries. Gaps will always arise if one focuses only on sectors through a salami-slicing approach. A neighbourhood – trilateral or bilateral – agenda of meetings would help. European countries could work on this.
97. The current global food crisis is an opportunity to reinvigorate pandemic planning for vulnerable populations. The food sector has become permanently more volatile. That the UNSIC head is now wearing two hats shows this realisation at the highest level.
98. International Labour Organisation involvement in this field is unclear at present. Ideas of Trades Union involvement in non-health sector pandemic planning could be contentious in some circles, e.g. if Unions push employers on health and safety rights. It is important to develop the right balance between service delivery and continuity.

Models of collaboration among neighbouring countries

99. The GHSAG process has been valuable e.g. for addressing border and screening issues, and might be replicated for EU Member States. If so, this would need four separate meetings of around seven Member States per session. This could be an answer to the need for collaboration between national authorities and international organisations. If it takes four meetings to address one topic for the EU, however, it is unclear how these issues can be addressed in the detail needed to enable advocacy of the approach to enthruse all other countries to cooperate and learn.
100. Within the EU, a meeting could be held to identify critical gaps in the plans of EU Member States. The non-health sector is important, as is getting neighbours together; and it is important to promote a multi-sectoral approach including the exchange of plans. Pandemic preparedness raises big cross-border questions. If health is a legal competence of national authorities, then it is unclear what should be done when health is devolved to regions within nations.
101. The Mekong Basin Disease Surveillance (MBDS) project has run for six years and has challenged surveillance and response systems across borders. In the EU, there have been political obstacles to progress with border controls and anti-virals.
102. On the IHR and border issues, it is unclear how GHSAG work can link to implementation of border management. Nor is it clear if there will be UN leadership on the borders issue. There is a gap here. It is unclear how it will be filled.

103. The MBDS, however, is not really working on non-health sector. There is a difference between UN planning for “C” group countries and the planning for “A/B” group countries. Richer countries have links to WHO but not so much to the rest of the UN System. If there are too many actors then there is a risk of duplication and of disincentives to engage. This requires greater coordination.
104. Neighbouring countries need to work together where one is a source of infection and there are inter-dependencies in trade, telecommunications and other fields which create multiple vulnerabilities.
105. Perhaps the critical step should be to create “islands” of common borders. Lessons from Bangladesh and India are important here. The tourism sector is in this respect critical in its consequences.

Partnerships among countries

106. The UK Health Protection Agency has partnership programmes with richer Commonwealth countries. The WHO has partnerships with poorer countries.
107. Partnerships like the MBDS need bringing together. This would facilitate cross-border discussions.

International leadership

108. The UN System Consolidated Action Plan shows that various fora are available. The question is what are the most appropriate fora for specific identifiable issues. There is no single international organisation mandated for addressing holistically the essential services. There is a leadership issue here: it is unclear where the leadership lies which could drive these issues forwards.
109. There is an argument that the leadership issue can be kept out of the UN System. The UN framework exemplified by the IHR is excellent for partnering. However, the Member States must look at what they can do to enhance the GHSAG agenda. This is the kind of cascading which may well be needed.

UN System operational continuity contingency planning

110. At the UN SG’s request, UN System pandemic planning guidelines have been created and UNSIC has assessed their quality. The 132 UN Country Team plans have three aims: staff health and safety; operational continuity for services including internal business continuity planning; and how to support national governments. They may or may not address the needs of other non-UN agencies. About 35 of the 132 have been rated as “quite good” but one issue concerns government plans in a pandemic: the 35 or so plans do not all bridge the gaps in government plans.

111. UN System business continuity planning has been a combined effort of UNICEF, WFP and UNDP to mainstream pandemic planning within 35 countries so far. Operational procedures vary across parts of the UN System. The New York office plans for the HQ Secretariat. UNICEF has been very progressive and has a back-up payroll facility in Europe if that in New York fails. The UN are keen to share best practices where possible. Their BCP must be linked to organisational systems. The UN are keen to run some simulations now within and across countries. The agencies cannot do much without private sector input e.g. in air and sea transport.

8. WHO's draft rapid response and containment protocol lays out "what" should be done and "how" to contain a pandemic. This will require globally unprecedented international coordination and resolute focus.

- **What more work is needed on the logistics and testing of the response?**
- **How will the necessary and complementary humanitarian response be coordinated with the containment effort?**
- **How well prepared are the international humanitarian community (institutions, systems, resources) to cope with a pandemic?**

Coordination and logistics

112. Essential are coordination of rapid response and a response based on good science. However, there is much talk about coordination; and it is clear that we must both coordinate and be coordinated, but need clear roles and responsibilities. Now is a unique opportunity which it would be inexcusable to miss.

113. UN System organisations have worked together to prepare the logistics for the response and now consider "delay" probably more feasible than "containment". Unless the international community can work effectively and quickly the rapid response will fail. This will be difficult. For example, the WFP has been working with IFRC and Malaysia on a pandemic intervention unit in which WFP leads the logistics cluster whether based on transport by land, sea or air (as currently for Burma).

114. It is unknown where containment will be needed - whether in an isolated country, or in a conflict zone. Military forces might be needed. Not enough has been done to test the international response. We need to work with identified countries to build regional capacity. Some obstacles may impede progress.

115. Much more has to be done on this issue with particular emphasis on SE Asia and Southern China. This area appears to have been the source of the last two pandemics. The possibility of this happening in any country where A/H5N1 is becoming enzootic can not be ignored. Those should be the countries where there is special veterinary emphasis. At the same time, veterinary services should be up-graded in all countries and be well-linked to public health.

Engagement with the private sector

116. Many multinational businesses need pandemic plans because the insurance sector requires them. In 2007, one major multinational food company revealed that only 3/32 executive board members would remain in post in a pandemic because the resulting workload would require next generation leaders to take over. Poor private sector planning would affect front-line international organisations unable to operate without functioning businesses able e.g. to supply ships for use in operations.

Military support

117. Further and more realistic support is needed. Some have pressed for greater engagement with the military including in training on the ground; and for civilians to work with the military in the field. WFP worked closely with Russia's EMERCOM in Afghanistan in 2001.

118. In one major Western country, a single office coordinates support for rapid response and containment either for WHO or bilaterally. The military can act swiftly if needed. The critical window is 15-20 days only, otherwise containment is not feasible. Reporting delays will further squeeze this. The political issue here is the conclusion of the response: i.e. at what point the WHO or UN Secretary General announces the failure of the attempt or the need to continue with it for a longer period. It is likely to be easier for a bilaterally acting government to withdraw than it would be for a UN organisation.

119. This is not a simple "black and white" question. It is worthwhile to take measures in the source country on the basis of decisions made minute-by-minute.

120. Even if spread to 50 million people cannot be prevented, there is a strong case for trying to contain it. Authorities need to plan for the case that people try to obtain what are seen as "magic bullet" anti-virals by force. It should be clear what is feasible and what is not, and where there is vulnerability and where there is resilience.

Humanitarian sector considerations

121. The humanitarian community will be very stretched by such an approach and accordingly need to plan to ensure their own internal operational continuity. Donors have funded the IFRC to strengthen community level preparedness in 22 countries which met in 2007 and agreed to cooperate. A simulation exercise in October with IFRC and OCHA will help to clarify roles and responsibilities.

122. There is a need to depoliticise humanitarian action in a pandemic.

123. There is a risk of food riots, related instability, and conflict now. These will all make the humanitarian community's tasks very difficult. Many donor embassies have pandemic plans to evacuate and relocate personnel, but the WFP will remain. There is a need for a clear statement of which donor countries will provide support and which will not. The WFP is planning for an 18 month operation, not 6 weeks, i.e. a period including pandemic waves and intervals based around WHO concepts. It will be difficult if there is uncertainty about the vision.

9. Coordination has many forms. It becomes more critical to success and more challenging with each rise in the number, complexity and scale of the organisations and networks concerned.

- **What is the scope for greater coordination of pandemic planning between the regional inter-governmental organisations?**

124. The UN Inter-Agency Standing Committee and 27 UN bodies are all at work in Bangkok. This complexity itself poses a question about intra-regional coordination as distinct from inter-regional coordination.

125. There is great scope for progress here. Planning at the global level tends to become locked into disputes or the difficulties of trying to come up with practices that can fit every country, as illustrated by the problems of the virus sample-sharing issue. A regional approach, or at least regionally led approaches to a common template, could be best. There is an issue here over what is defined as a region. For example, the WHO Regions are arguably too large e.g. WHO European region is arguably two if not three regions.

10. Specialised international organisations are well placed to focus on individual types of infectious disease. Zoonoses (and emerging infectious diseases) as a group challenge conventional disciplinary boundaries, hence the New Delhi theme of "One Health, One World".

- **How does a targeted global response to tackle avian and pandemic influenza fit into recent thinking on the need to focus more on efforts to improve health systems as a whole rather than simply on individual diseases or issues, as indeed is reflected in the international health Partnership and emerging in the G8?**

Defining the scope of activity

126. There is a critical definitional issue here. It would be a pity to revert to the position in 2003 given the gains made in inter-sectoral cooperation which are still fragile and need sustaining. Looking at the threat more broadly could enable this; but e.g. offices dedicated to influenza cannot simply be re-orientated.

127. The scope of emerging infectious diseases (EIDs) could be too broad and overlap with Global Fund for AIDS, Tuberculosis and Malaria (GFATM); or the scope could be narrowed to animal infections. There needs to be a coherent definition to address the issues strategically. The ideal is “One Health, One World” but this needs focus and definition.
128. It is unclear what is meant by “one type of disease”. The FAO and OIE have plentiful experience. There are agreed principles of detection, surveillance, diagnosis, and response.
129. Most EIDs are zoonotic. We need to explore the most likely sources of EIDs: vector borne disease (VBD) surveillance (e.g. for diseases like Bluetongue) and global climate change. We need a framework so we know what to do when VBDs spread. The avian / pandemic influenza framework can apply to other diseases.
130. There is a need for laboratory capacity for new unknown diseases. Surveillance is difficult. Most difficult is the “One Health, One World” concept. We know that veterinary and human health should work together but this remains a big challenge in many countries. Avian influenza preparedness can be used as a vehicle for most EIDs.
131. Pandemic influenza is the worst case scenario: if this is addressed then so too are many other challenges.
132. The question could be about how to focus on infections with pandemic potential to which audiences will respond whether the infections are zoonotic or otherwise. If so, then the criteria should probably include acuteness versus chronicity (to exclude HIV), and respiratory transmission dynamics (versus other routes). There is climate change relevance and there are implications for the research agenda including food trade / industrialisation as drivers of new emerging diseases.
133. In preparing for a pandemic, we are also asking others to join in a new activity. The risk is that some vital programmes will suffer because many have been diverted into pandemic influenza. Preparedness needs to be 90% generic and 10% disease-specific, as for non-pharmaceutical interventions.

Sustainability and funding

134. Sustainability requires funding now which will not be available later on. It is vital that the MBDS and Commonwealth activity continue. It cannot be assumed that UNSIC will continue. The issues need to be mainstreamed within national security approaches.

135. It is commonplace to refer to avian influenza fatigue. In the next 3-4 years there is a need to improve health systems. The International Health Partnership is focusing on this too. The Global Fund in 2007 also decided to address this. The forthcoming G8 meeting this Summer will also focus on it. The trend will persist over the next 10 years. The influenza community should join this trend.

Targeting specific diseases

136. Western governments have given large sums to HIV, Tb and Malaria. If requests were made for funds to improve infrastructure in developing countries then such large sums would never be granted. So a disease-specific approach may generate more funds than would otherwise be available. If requests are grounded in a pandemic threat, then it may be easier to move forwards than if we stay with the "One Health, One World" concept. More broadly it is important to recognise here that the ways in which such problems are framed do influence the political and financial backing received.

137. The pandemic influenza work has delivered better working across animal and human health systems. The priorities in developing countries will be very different.

138. A targeted global response goes beyond the specific competences required for one disease. This has long been considered with the focus on health systems. Only now is greater political attention being given to it, and this should be welcomed. There is not an "either / or" issue here but broad agreement in global health fora on the need for vertical, diagonal and horizontal coordination. There is a need to look at and to strengthen health systems, otherwise the sustainability issue will not be addressed. The GFATM has opened a window on this. The UN System should ensure coherence in our approaches across organisations.

Health systems approaches

139. There is a need to consider the overall framework for improving health systems, and within this context consider what is needed to respond to events: processes, structures, technology. There are generic elements here, and fundamental links to public health, all of which need emphasis.

140. Pandemic influenza preparedness has a broad base which works for many diseases. Agencies need to propel sector activity forwards. Pandemic influenza work fits with the work on health systems because it is centred on human resources, organisation of care, pre-primary care, responsibilities of doctors and nurses for professional safety. All this stimulates the imagination.

141. On the other hand, a focus on health systems could lead to loss of attention to zoonotic / wildlife diseases. This would be worrying given that a high proportion of all new human infectious diseases come from animals. It could also lead to a loss of non-health sector preparedness.

142. However the application of the *One World, One Health* theme has not engaged the public health community as well as did the Emerging Infections initiatives of a decade ago. Perhaps this is a problem of name, or of the perceived leadership or ownership of the initiatives. Newly emerging infections are of vital importance generally but they do, by general definition, neglect those infections which have already emerged including human seasonal influenza and perhaps also pandemic influenza.

143. Yet health systems have to improve. It should be acknowledged that practical health sector responses to pandemic preparedness in poorer countries have been neglected, partly because they are so difficult. It may be more important to determine the cross-government work needed in poorer countries for a severe pandemic.

Leadership by coordination

144. It would be disappointing if UN agencies cannot show leadership by coordination. Others can do things, but leadership by coordination must be continued by relevant international organisations. Federal countries will recognise this problem with their own internal structures.

SECTION D.

WHAT SHOULD BE THE UK'S ROLE IN SUPPORTING THESE INTERNATIONAL EFFORTS?

Broad options

145. There are numerous points to consider. Among these are:

- strengthening investment in avian influenza surveillance and eradication;
- feasibility of pandemic containment, and political implications where not feasible;
- feasibility of pandemic mitigation;
- better understanding of the geography of risk;
- support for existing networks where the risks are highest as e.g. in areas of Asia;
- better relations between international organisations and existing but sometimes fragile functional networks which seek their support not their domination;
- work in resource-poor areas for integrated disease surveillance and response; and
- a systematic research agenda linked to policy issues across all fields: economics, social sciences, and epidemiology to inform policy over 2008-2013.

Using leadership

146. Networks and channels of influence generate considerable added value, and it is important to see where the greatest returns are produced. The science informing policy development can be shared. The UK could work at managing partnerships. This is often overlooked. It can vary over time by being at first low cost / high risk, then later high cost / low risk. The UK could also explore the concept of partnership management in the round, map the stakeholder landscape, and understand the various relationships so that they can be used to best effect.

147. The UK has done some of the most serious pandemic planning of all countries, and many have learned from this. Such learning should be better targeted. The UK could consider offering teams to work with G20 members who count in almost every systemic way as do e.g. the BRIC countries. This would be very effective. The same message could be put to the others of the G7 e.g. in setting up sectoral stability fora so that these are not typical North / South groups but are essential if an event happens.

148. Leadership by example is a powerful tool. This could be made better known in other countries.

149. The UK's Central Government coordination system is a strong model for other countries on how to be multi-sectoral and to sustain national preparedness. Many other countries, including a number in Europe, lack a similar mechanism functioning outside crises but this exposes them to the risk of being too late. Other government systems can achieve this but the UK has an exemplary "top-down" model.

150. The UK could push for a G8 communiqué calling on the World Bank and other institutions to look at sector activity fora modelled on the Financial Stability Forum. Such fora should probably be sector-based and tasked to look at pandemic issues as a priority. The UK could also press for a neighbourhood – trilateral or bilateral – agenda of meetings in Europe.

Sharing best practice

151. There are examples of best practice in the UK: e.g. the Civil Contingencies Act, the national pandemic framework, scientific reputation. Much could be achieved by focusing on these values and achievements in bilateral partnerships and relevant fora. It is also worth examining the value for money gained by spending on global public goods.

Technical expertise

152. The UK's HPA has skills and expertise including in exercises which are a valuable means to learning, and in real-time epidemiological modelling. Help is being given to Egypt for an exercise later in 2008. Appropriate messages are needed too.

153. The UK has much knowledge of training needs and surveillance implementation issues. Many countries do not know how to scale up diagnostic work. It would be useful to share this knowledge with countries most at risk. The UK and Netherlands have excellent modelling groups, whose expertise could usefully be shared with others.

154. There are many issues at the animal / human interface. The OIE, FAO and WHO will meet in October to define these questions including e.g. on the risk factors for human infection, and on various pharmacological and molecular challenges. This research should be a collective effort rather than be undertaken by single countries acting alone.

155. The UK is the home of the original *World Influenza Centre*, source of the WHO's system of Collaborating Centres. It remains strong on the scientific public health side with the NIMR, NIBSC and the HPA. There are major new academic developments such as antigenic cartography (Cambridge) and epidemiological modelling (Imperial), extending to Department of Health modelling for policy and practical issues. Virology needs an integrated approach including future investment and succession planning. There are EU funding opportunities for strategic infrastructure and research funding. There are dangers of falling behind international competitors.

Prioritising among regional contacts

156. East Asia is at present considered quite likely to be a pandemic epicentre. It is reasonable to focus on this area for surveillance and containment but not for mitigation. In this respect the countries of Eastern Europe and Africa may be more affected. Japan and Australia have strong bilateral ties. The HQs of all the health ministries in East and South East Asia are well known to each other and aim for bilateral cooperation including exchange of human resources. However on mitigation issues there is little or no contact with those in Eastern Europe. It would be appreciated if the UK could address this problem e.g. through a division of labour and promoting inter-regional dialogue.

Maintaining the scope across avian and pandemic influenza

157. It is important for the UK to focus on avian and pandemic influenza including spread in birds. It is also important to ensure that the gains made are consolidated and do not revert to the *status quo ante*. It is still open to debate how far efforts should address EIDs. Much is still being learned, as in the early years of HIV; and this includes many lessons from experience of livestock culling and compensation.

158. The UK approach is well-integrated, though there are other models in Europe. Joint meetings of Chief Medical Officers and Chief Veterinary Officers in Europe under the 2005 UK Presidency could be resumed and extended. The “One World, One Health” model cannot perhaps be taken too far given its limited acceptance in the human health sector.

Funding resource gaps

159. Prevention is cost-effective and should be backed through support to animal health systems. Historically animal health has often been under-funded. The joint UNSIC and World Bank global progress reports have identified funding gaps. The big gap in Sub-Saharan Africa (\$7m in un-earmarked funds) is a real source of worry.

Virus sample-sharing and the global distribution of benefits

160. On sample sharing, the UK should continue its active engagement on this including in challenging negotiations over the distribution of in-pandemic benefits. All will be worse off if the Global Influenza Surveillance Network (GISN) collapses. The most recent meeting on this subject did not address the details of a benefits-sharing package. Some ideas concern mechanisms for providing pandemic vaccine to developing countries in a pandemic, i.e. ways to create production capacity in a developing country but this will require funding. A major international charity is one possible source of funds. The UK could consider estimating potential costs of contributing to such a benefits package in the light of continuing inter-governmental discussions.

161. Initially veterinary laboratories found it easy to obtain influenza virus data and samples. This has now become more difficult presumably because of controversy over samples of virus from humans. The UK could continue to play a role because of its European reference laboratory for avian influenza and its importance in the UN network. The Community Reference Laboratory could perhaps have a stronger position in Europe rather than being considered as a separate national facility.

Capacity-building and development assistance for developing countries

162. The UK should consider the issue of providing capacity in developing countries as part of the international support strategy. Discussions have not yet touched on what can be burning political issues, including the GISN system and concerns about it. The background briefing paper by the London School of Hygiene and Tropical Medicine (LSHTM) bears on the coherence of the influenza strategy with the UK's wider development policies. This poses the question whether influenza strategy is being related more to development assistance than to a whole-of-government approach. The UK needs to consider this point.

163. It may be strategic to support UN or regional bodies. Donor countries do not always have the capacity and presence to give country support and therefore could choose to strengthen the UN system. The UK has a wider range of opportunities than some: so the questions concern what the UK would support the UN system to achieve; and where would the UK place its country focus e.g. in areas such as Africa. This approach would link up to development policies. A coherent UK approach from a human health standpoint would show links to the International Health Partnership initiative, and fit into a health systems approach without losing sight of disease-specific challenges.

Broad-spectrum versus targeted approaches

164. The UK's broad spectrum approach is appreciated. Options outlined in the LSHTM's background briefing paper are pertinent. The issue should be regularly on the G8 agenda, otherwise the opportunity for a more generic approach could be lost.

165. However, to target the broader category of zoonoses might at present be problematic for various reasons. There is a need to rebalance the modalities of cooperation and to distinguish the countries where the battle against A/H5N1 has been lost from the other countries of the world. If the former countries are at the epicentre of a pandemic, then the effort at delay or containment would be beneficial; and there are also questions about rapid vaccine production and diagnostic tests. Africa has not been well treated globally in terms of human health, while Europe is not so well prepared in the Eastern parts. The first pandemic influenza cases will arise in a context of very "noisy" data, hence the real need for a rapid influenza diagnostic test for immediate use.

166. Extending scope to zoonoses generally could also be counter-productive because (i) the current threat persists; (ii) information on the threat is unclassified and can easily be shared; (iii) the concrete threat has delivered persistent images in the mind; (iv) there are generic spin-offs already apparent.

Disaster-management skills for all hazards

167. The UK could share disaster management skills with the international organisations so as to strengthen the hazard analysis of UN Country Team pandemic contingency plans. The UK could also consider, perhaps through UNSIC, initiating an informal discussion with the UN Security Council on what they would do in a pandemic.
168. More generally, there is a need to support the world's regional blind spots first. For example, it is sometimes assumed that a country or region should await avian influenza in birds before worrying about a pandemic.

Humanitarian sector expertise

169. The UK has a comparative advantage in the humanitarian sector. It cannot be assumed that one major Western country will shoulder the whole burden of e.g. NGO support in a pandemic. There is scope for more research into whether and how pandemic preparedness can strengthen wider resilience to other threats. DFID has good relations with regional institutions and could work to strengthen disaster management work there among other contributions to international policy.

Making plans operational

170. The workshop's background briefing papers are a source of reference and should be kept up-to-date. The UK's multilateral approach has been excellent and could usefully continue including with respect to vulnerable countries, which will probably be the most severely affected. It is valuable to link preparedness for both avian and pandemic influenza. Many countries have only "paper plans" which need to be made operational. The UK could accordingly support efforts to do this.
171. Operational research in livelihoods is also important. Countries like the UK are sometimes or even routinely criticised for their work on poultry farming, when it is not just a question of infection but of how to meet people's minimal or basic needs. Programme evaluation is needed to close this loop.

Vigilance without over-reaction

172. The UK should be vigilant but not over-reactive. For example, under what circumstances should a university with e.g. 40,000 students close? It is important not to over-react. A country could be prepared for a 1918-scale pandemic while the reality turns out to resemble the mild pandemic of 1968. A pandemic severity index, based on other familiar forms of public early warning system, might help to manage the risk of disproportionate public reaction.

A sustained approach

173. Many countries are scaling back their investment on pandemic preparedness due to a loss of fiscal and political momentum. The UK is sustaining its work. It could join with the other European states in taking this approach, including the next trio of European Presidencies (France, Czech Republic and Sweden), the other Nordic countries, and the European Commission, so as to sustain the momentum of all EU Member States. The UK could work similarly with international organisations at the global and regional levels to sustain this activity.

Good work on seasonal influenza

174. In Europe the UK is second best in seasonal influenza vaccine uptake (though this is below the World Health Assembly 2003 target), and has the best monitoring of coverage in the world. The UK could take on a leadership role to raise standards across the EU. The UK could also take a leadership role with the WHO's Global Vaccine Action Plan (GAP) to enhance influenza vaccine use and development, which is currently the only way to increase global capacity for producing a pandemic vaccine. The UK is the only EU country or institution to make a financial contribution to the GAP as well as major contributions in kind.

Extending the GHSAG work

175. The GHSAG model is producing excellent work, especially on investigating the difficult issues of policy and practice likely to arise in neighbouring states. However, by definition at present that work is confined to just 8 countries of which four are in Europe.

176. There is a case for advocating use of the GHSAG model of policy surveys within the EU and the wider European Region. There has been no previous mechanism for this. The new Influenza Section of the EU Health Security Committee (essentially the pandemic preparedness coordinators for Europe) could enable the UK to work with European partners to make this work more widely available.

