

Department of Health (DH): UK Influenza Pandemic Preparedness Strategy

Response by the Wellcome Trust

June 2011

Introduction

1. The Wellcome Trust is pleased to have the opportunity to respond to this consultation. In light of recent lessons learned during the H1N1 (2009) pandemic, we are pleased that the DH is taking this opportunity to update the UK's Influenza Pandemic Preparedness Strategy. We welcome the risk-based approach taken in the strategy and the increased focus on scientific evidence at both the planning and response stages. The strategy provides some helpful guidance on responding to a pandemic, and we feel there may be merit in extending the scope of the strategy beyond influenza and respiratory infection.
2. Given the Trust's remit our comments focus on strengthening the research response and the application of research in an influenza pandemic or outbreak due to a novel severe acute respiratory infection (SARI). In developing this response we have worked closely with our in house influenza team.

Research Response

3. One of the key recommendations based on lessons learned from the H1N1 (2009) influenza pandemic is improving the **initial response** to pandemics. This should focus on the rapid and accurate assessment of the nature of the virus and the spectrum, pathogenesis, and clinical management of associated illnesses. In order for this to occur, the appropriate mechanisms need to be in place to allow researchers to respond quickly to a pandemic or novel SARI threat. The optimal strategy to accomplish this, is to have platforms in place that are conducting studies during the interpandemic period and are capable of surge responses. As shown by the severity of the winter 2010-11 wave of 2009 H1N1 virus, this pathogen and its anticipated descendants will likely continue to cause excess mortality in those under 65 years of age for some years to come.
4. Robust **surveillance systems** are key for the timely detection of new threats and rapid collection of epidemiologic and clinical data for informing the responses to a pandemic or outbreak. These need to be linked to similar systems in other parts of the world, so that data can be quickly shared and interpreted as new threats emerge. During past pandemics, weak surveillance and data sharing arrangements have hampered responses. We welcome work underway to enhance surveillance efforts at the animal-human interface, community and hospital based levels, and recommend that these are embedded clearly into the strategy and integrated with international efforts.
5. We are pleased that the DH is commissioning the development of **research protocols** to ensure a rapid research response. The protocols that emerge from this process should be integrated with those being developed by other countries or research groups (see below) so that systematic data collection and sharing occurs. While pre-approved protocols that can be rapidly mounted in response to a pandemic are necessary, studies during the interpandemic period can address key questions and harmonize responses.

6. Influenza and other SARI threats such as Severe Acute Respiratory Syndrome (SARS) are global threats that the international community must work together to address. The Trust supports several international collaborative research projects which conduct influenza-related research, including the South East Asia Infectious Disease Clinical Research Network (SEAICRN). Influenza research is also supported at our Major Overseas Programmes in Africa and Asia. Currently the strategy does not address the important role that **international research** can play during a pandemic and in the inter-pandemic period. During the 2009 H1N1 pandemic significant pathogenesis and clinical management data came from international sites, such as the South East Asia Infectious Disease Clinical Research Network, Chinese University of Hong Kong and University of Hong Kong.
7. During a recent meeting of the Heads of International Research Organisations (HIROS), the creation of an **international severe acute respiratory infection consortium** was endorsed. The idea is that the consortium would have the capacity to conduct high-quality, hospital-based pathogenesis and clinical management studies during the inter-pandemic period and the flexibility to respond quickly to emergent threats (see Annex A). The consortium could add significant value to responding to influenza or other SARI threats by improving rapid data collection and sharing, creating a global registry of clinical and laboratory data, developing shared biobanks, enhancing the ability to recruit large numbers of patients into studies and more. The DH should encourage engagement of UK investigators with this initiative and consider how best to integrate the initiative with its own call for pandemic proposals.
8. There is a need for further research into the emergence, transmission, pathogenesis and control of influenza. We are pleased that research is being commissioned into areas such as behavioural and pharmacological research. However, we also recommend conducting research into the disease in more seriously ill patients to identify specific determinants of susceptibility and severity (e.g., virus factors, host genetics, secondary infections) and to improve clinical management.

Evidence Based Policy

9. Data from surveillance and research are crucial for properly preparing for an influenza pandemic or other SARI threat and launching an effective response. According to a recent review of the UK's use of scientific advice and evidence during emergencies, often the Government does not seek scientific advice until after an emergency occurs. We are therefore pleased to see that scientific evidence is being increasingly incorporated into the strategy.
10. A further method of ensuring that scientific evidence is integrated into the process before an emergency occurs, is by incorporating a **quantitative framework for pandemic or outbreak severity assessment** into the strategy. The strategy is based on responding to low, moderate, and high impact influenza events, but currently it does not quantify these levels. As seen in the 2009 pandemic, the local impacts of an event will vary with location, time, and level of healthcare (e.g., ITU, hospital ward, outpatient) so that multiple variables need to be considered in such analyses. Furthermore, rapidly moving events and differential impacts will inevitably occur and render the laudable goal of proportionate responses difficult to implement. For example, one practical consequence of these geographically diverse impacts will be issues related to transport of seriously ill patients for specialty care (e.g., extra corporeal membrane oxygenation).
11. While it is important to base strategies on evidence, a lack of evidence does not necessarily indicate that a particular strategy does not work. There are several interventions which despite a lack of definitive evidence, may aid in diminishing the spread of influenza. For example, limiting mass gatherings and providing facemasks to households might slow the spread of disease. The latter strategy could be tested in the interpandemic period. The expansion of vaccination target groups for seasonal influenza could also be beneficial with regard to reducing its impact. There is some evidence that vaccinating children not only provides direct

benefit to them but also indirect protection to contacts. We recommend that further research be conducted into the benefits of these interventions.

12. The strategy is unclear on who is responsible during a pandemic for providing messages to the public, for example, the Health Protection Agency, the Chief Medical Officer or the Health Minister. We recommend having clearly designated spokespersons during a pandemic to ensure consistency in the message. Widespread media attention will likely occur at the earliest stages of emergence of a novel threat, so that communication strategies will need to be activated correspondingly and transparently address topics like travel restrictions, school closures, and treatments early on in the event.

Health and Social Care Bill

13. While the revised strategy builds on lessons learned from the H1N1 (2009) influenza pandemic, it does not address the proposed changes to England's health care system. The Health and Social Care Bill contains a number of reforms which will not only affect England's ability to prepare for and respond to an influenza pandemic, but the UK's.
14. During the H1N1 pandemic the **Health Protection Agency** (HPA) played an important role in providing independent health protection advice to the Government and the public. Under the proposed reforms, the functions of the HPA are being brought into Public Health England, within the UK Department of Health. As stated in our consultation response to the Department of Health White Paper: Healthy Lives, Healthy people¹, we consider bringing the main source of health protection advice within the Department will undermine the ability of the system to provide independent advice – particularly in a contentious situation such as an influenza pandemic or emergence of a novel SARI threat.
15. We are concerned that the **decentralisation** of the health system proposed in the reforms may have a negative impact on the consistency and quality of the response across England and the UK. The strategy itself raises concerns over decisions in one local area or region having a detrimental effect on other areas. While flexibility in local response is necessary, the strategy should specify at what level specific decisions lie. This includes whether a decision is made at the UK level, or devolved.

Monitoring, Evaluation and Review of the Strategy

16. An independent review of the revised document and its associated protocols need to be conducted by public health and clinical experts who are not part of the government or its current committees. This would include consideration of decisions on stockpiling and replacement of key pharmaceutical interventions (e.g., antivirals, antibiotics, pre-pandemic vaccines) and the value of non-pharmaceutical interventions.
17. The **Scientific Advisory Group for Emergencies** (SAGE) plays a key role in coordinating strategic scientific and technical advice during emergencies. Since its conception, SAGE has only been convened twice, the first instance being the H1N1 (2009) influenza pandemic. We support recommendations to conduct an independent review of the group, especially in light of concerns about its organisation and transparency.
18. There is scope for improvement in the **National Pandemic Flu Service** (NPFS), specifically Antiviral Collection Points. We are concerned that NPFS appears to work under the assumption that the illness will be qualitatively similar to seasonal and past pandemic influenza. We recommend conducting an evaluation of the effectiveness of the NPFS.
19. We would be happy to provide further details about any of the issues raised in this response.

¹ www.wellcome.ac.uk/stellent/groups/corporatesite/.../wtvm050959.pdf

The Wellcome Trust is a global charitable foundation dedicated to achieving extraordinary improvements in human and animal health. We support the brightest minds in biomedical research and the medical humanities. Our breadth of support includes public engagement, education and the application of research to improve health. We are independent of both political and commercial interests.