

Multi-Sectoral Whole-of-Government Coordination and Planning

1 Summary

In preparing for the possibility of a severe influenza pandemic, a number of governments have adopted a multi-sector approach. Recognising that the impact of a severe pandemic will reach far beyond the health sector, many Ministries have come together to collaborate in pandemic planning to mitigate the impact of a pandemic on essential services that enable a society to function. This paper seeks to highlight key achievements, gaps and lessons from multi-sector coordination and whole-of-government planning.

Global preparedness for pandemic influenza achieved many important outcomes. It developed improved systems to respond to public health emergencies, developed multi-sector networks that created a culture of collaboration, led to better interactions between animal and human health, and supported the implementation of the International Health Regulations by strengthening surveillance, detection, confirmation, reporting and readiness to respond to a pandemic. It raised awareness of emerging diseases and provides lessons on how to better approach other potential threats.

The whole of society needs to be prepared for threats that have the potential to affect large swathes of the globe and impact multiple sectors. Providers of essential services are inter-dependent and rely on the goods and services of other sectors in order to sustain their operations. The health sector alone cannot manage the full impact of a severe crisis. In health emergencies, the help of other sectors is needed. This calls for multi-sector collaboration. It requires a concerted effort by Government, business and civil society to mitigate the impact of a pandemic on the economy and society. Preparedness requires coordination, integrated planning and the management of complex relationships across sectors; and between international, national and local actors. Business continuity plans are at the heart of preparing the whole of society for pandemic.

A strong national strategy is key to a coordinated response. It is critical to exercise central coordination through an inter-Ministerial committee, supported by a parallel committee of officials at working level. There needs to be a focal agency with the mandate and clout to lead coordination. Plans should be flexible as there are many unknown variables in disaster planning.

Tabletop exercises and simulations help demonstrate what is required to bring about optimal results. Replicable best practice in simulation exercises includes the UK's 2007 Winter Willow exercise, which involved 5000 participants from Government, industry and the voluntary sector.

ASEAN have developed an innovative system for measuring national multi-sector preparedness.

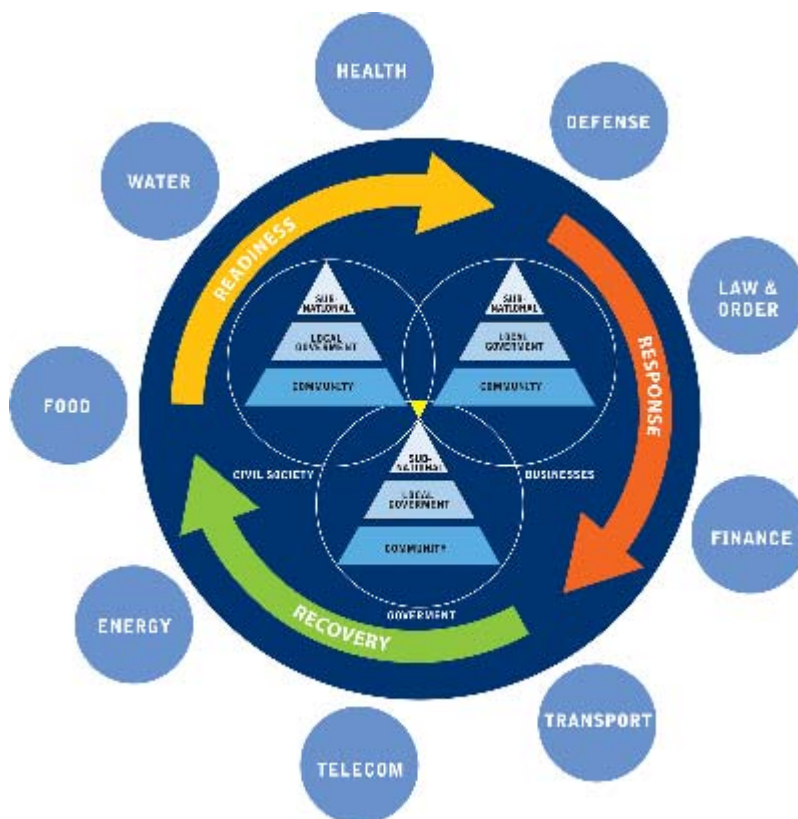
The Humanitarian Pandemic Preparedness (H2P) initiative has enabled National Red Cross/Red Crescent Societies to strengthen their relationships with Government emergency and public health planning bodies and to get a seat at the Government planning table. The relationships that have been built can now be sustained for the purposes of planning for other threats. But civil society organisations are not sufficiently engaged in national planning in many countries.

Engaging the public is a key part of disaster preparedness. The public needs to know what to do and be mentally prepared for tough measures, so that they can protect themselves and play their part in national response.

External finance can be a critical incentive and prerequisite for progress in less developed countries. The Central Fund for Influenza Action has invested in country-level projects where UNDP and WHO country teams are supporting Governments to kick-start multi-sector planning.

The networks that were established through pandemic preparedness processes proved of value in ensuring effective coordination and communication in the response to H1N1. The emphasis on a beyond health approach engendered collaboration between different Ministries and sectors which provides a platform for inter-disciplinary collaboration to combat a range of risks. The office of the senior UN System Influenza Coordinator created networks of expertise and opened lines of communication for data sharing. This helped to improve capacity for risk analysis, prediction, prevention, preparedness and control.

The coordination, communication, organisational structures, education and promotion of multi-hazard approaches that pandemic preparedness entailed are transferable to other threats.



The diagram illustrates the whole-of-society approach. It is represented by the three circles in the middle of the diagram: government, civil society, and business. The pyramids inside the circles represent the levels within each sector (including sub-national, local government, and community). The circles around the disaster management continuum of readiness, response, and recovery represent key essential services. (WHO, 2009)

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2 Key achievements

Notable achievements in the area of multi-sector whole-of-government coordination and planning over the last 4 years include:

One health: Further improvements to prevent the transmission of zoonotic diseases are required as the public health threat is still present, as witnessed during the 2009 pandemic. The concept of “One Health” has been strengthened as a result of the global response to avian influenza and has developed policies and strategies to comprehensively manage diseases at the animal-human health interface. The “One Health” framework was developed by the FAO, WHO, OIE, UNSIC, UNICEF, and the World Bank. The concept encourages cross-sector collaboration and the development of sustainable approaches to address the continuing economic, political, and health challenges that diseases such as West Nile Virus, Mad Cow Disease, SARS, H5N1, and H1N1 present to a country. “One Health” emphasizes the need to promote multi-sector, non-pharmaceutical interventions in pandemic preparedness and response as the health sector cannot manage the full impact of the crisis. The Framework for Sustaining Momentum and the Hanoi Declaration from the 2010 Inter Ministerial Conference on Avian and Pandemic Influenza highlight the way forward, advocate for global cooperation and inter-sector collaboration, and call for building capacity and sustainable strategies within existing programmes that translate across “all-hazards”. The concept of an “all-hazards” approach to disaster management and emergency response, is well-accepted. Epidemics and outbreaks can be easily incorporated into the “all-hazards” approach, and represent a significant convergence among communities of practice.

Senior leadership: Where the whole-of-government concept is best-grounded, (eg Singapore, Malaysia and Thailand), (1) very senior government officials have recognized the threat, and expressed their commitment and support; and (2) the pandemic risk has been regarded as a national security threat.

Civil society engagement: USAID invested significant resources through the Humanitarian Pandemic Preparedness initiative (H2P) in National Red Cross/Red Crescent Society community-level pandemic preparedness efforts. In many countries Red Cross/Crescent societies have become recognised as participants in national planning processes. RC/RC can represent civil society views in these processes and serve as an interface between Government and NGOs, by advocating NGO concerns to Government. The relations established during the H2P project are being maintained. Deep and varied partnerships were developed through the work done for H2P. For many NGOs and national societies, the H2P project helped expand their role in preparedness and increased their visibility and credibility with government and peers.

Civil-military coordination: USAID has supported US Africa Command and US Pacific Command to support developing country militaries to prepare for pandemic influenza. This engagement has helped national military actors to gain membership of National Pandemic Committees and to be included in national plans and planning processes. Events organised by AFRICOM and PACOM have given military and civilian organizations an opportunity to build relationships for future engagements by setting the conditions for informal discussions of important topics in a benign environment.

Measuring readiness: ASEAN has been working to assist ASEAN Member States (AMS) in monitoring their progress in strengthening national multi-sector preparations to meet pandemic threats. An ASEAN Mapping Exercise in 2007 indicated that countries had

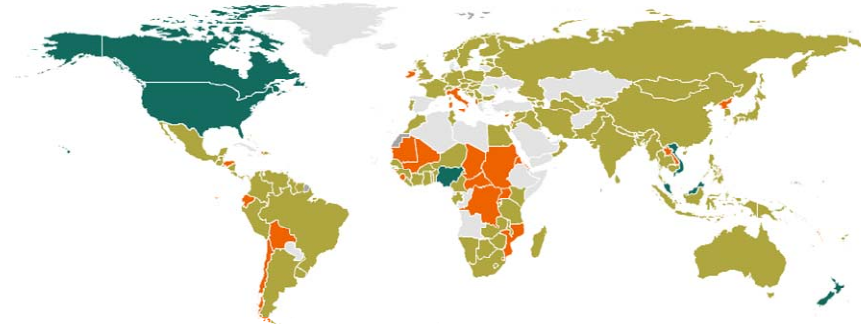
developed national pandemic preparedness plans but that most plans did not go beyond WHO Pandemic Alert Phase 4, and were limited to health. Results of the ASEAN Mapping Exercise were reviewed in a regional workshop in Bangkok. An outcome was a recommendation that ASEAN should assist in developing a set of indicators to be used to assess and monitor national progress in preparing for a multi-sector pandemic response. ASEAN established the ASEAN Technical Working Group on Pandemic Preparedness and Response (ATWGPPR) to guide these efforts. In 2008, a meeting in Kuala Lumpur completed a "Guide to ASEAN Indicators". These indicators were tailored to the region and were descriptions of the minimum structures and mechanisms that should be in place and functioning as an indication of a country's degree of multi-sector PPR. The ATWGPPR prepared Terms of Reference for ASEAN to proceed with a series of country assessments based on the ASEAN Indicators. As a means of fostering information sharing and support among AMS, assessors drawn from AMS formed joint multi-country teams to assess their own country and other countries represented on the team. The data gathering process was more of a self-assessment than an audit. The core data gathering instrument in the assessment was a survey questionnaire based on the ASEAN indicators. The indicators and survey questionnaire were organized into four categories: National Government Planning and Coordination; Sub-national Government Planning and Coordination; Whole-of-Society Planning; and Sector Planning and Continuity of Essential Services.

PIC readiness tracker: The Pandemic Influenza Coordination team in the United Nations Office for the Coordination of Humanitarian Affairs developed an interactive online pandemic readiness tracker (at www.un-pic.org) to monitor progress toward multi-sector pandemic preparedness of (a) Governments and (b) UN country teams. An interagency process developed a series of measurable indicators which taken together give a good flavour of pandemic readiness. A website was set up to record how far each Government and UN country team had implemented critical measures. PIC regional planning officers and UN country team AHI focal points populated this website to record country evidence. This provided a snapshot of progress toward preparedness. It enabled PIC to measure whether its efforts were bearing fruit and to identify where additional help was most required. It enabled quarterly reports to be provided to the UN Deputy Secretary General's Steering Committee on Influenza regarding progress with UN preparedness. This online readiness tracker approach could easily be replicated to monitor progress in preparedness for other threats.



National Pandemic Preparedness Map

Overall level of pandemic preparedness



The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Select Country

Select map per indicator

LEGEND:

Sudden Pandemic Contingency Planning

- More prepared
- Medium
- Less prepared

UN System Preparedness Map



PIC readiness tracker, www.un-pic.org

Business continuity planning: Awareness of the potential consequences of a severe pandemic has led to improvements in preparedness for emerging infectious diseases and for consequences to essential services. Pandemic preparedness efforts have promoted the establishment of business continuity planning, which has taken root in a wide range of organizations. BCP has applications for other threats. In many countries, BCP was introduced through pandemic preparedness initiatives and has a high likelihood of being maintained with minimal efforts. The World Health Organization's Pandemic Influenza Preparedness and Response document guides countries to develop continuity policies across sectors that will enable the continued operation of business, essential services, educational institutions and other critical organizations. WHO urges these continuity plans to ensure the allocation of resources to protect employees and customers and facilitate communication to employees to protect themselves during the pandemic. The UK Government's Cabinet Office guidelines for business continuity during emergencies call for organizations to perform an assessment of their operation, identify critical activities that may become vulnerable during a crisis, develop a plan to ensure these critical activities continue to function, and put together mechanisms to resume normal business activities during the recovery phase. WHO's whole-of-society pandemic readiness guidelines contain a checklist of BCP actions that are applicable to any type of organization that is reproduced below...

Pandemic influenza business continuity management checklist for businesses and government organizations

Plan for impact on your organization

1. Identify a **pandemic coordinator** for preparedness and response planning.
2. Identify the **critical activities** and **functions** that must **to continue** during a pandemic, as well as resources needed.
3. Assess the need to **stockpile strategic reserves** of supplies, and equipment.
4. Establish clear **command** structures, delegations of authority, and orders of succession for workers and identify **who** is going to do **what, when, and how**.
5. **Assign** and train alternate personnel for critical posts.

6. Identify units or services that need to be **downsized** or **closed** to **reallocate** human and material resources.
7. Develop **standard operating procedures (SOPs)**, and identify when they should be implemented and suspended.
8. Determine **financial risks** in the event of an influenza pandemic.
9. Identify **customer needs** during a pandemic and review business model.
10. Determine the ability of the organization to continue operations if **critical infrastructure services** become unavailable.
11. Determine the **financial consequences** of fluctuations in the supply and demand of the products and/or services during a pandemic.
12. Plan for **security risks** to operations and supply chains.
13. Conduct an **exercise** to test your plan and **update** periodically.
- Establish policies to be implemented during a pandemic**
14. Establish a **personnel policy**, addressing sickness, absenteeism, and when to return to work.
15. Assess a need for continued **face-to-face contact** with other employees / customers / suppliers and modify as needed.
16. Develop **social distancing protocols** that may be used during a pandemic.
17. Establish guidelines for **priority of access to essential services**.
- Allocate resources to protect employees and customers**
18. Implement hand **hygiene in the workplace**.
19. Procure **adequate infection control supplies**.
20. Develop a plan for **family and childcare** support for critical workers.
21. Develop a plan for **psychosocial support** services to help workers.
- Communicate with and educate employees**
22. Develop a system of **communication** with employees, customers and suppliers in the event of a pandemic.
23. Ensure that **information** on measures that your business is implementing during a pandemic is available to employees.
24. **Train staff** on infection control and communicate essential safety messages.

Inter-Ministerial collaboration: The emphasis on a beyond health approach has helped to engender collaboration between different Ministries and sectors which provides a platform for inter-disciplinary collaboration to combat a range of risks.

UN system coordination: The policies forged between UN agencies and the World Animal Health Organization (OIE) with the support of the UN System Influenza Coordination (UNSIC) office, and their development partners, created networks of expertise, opened lines of communication for data-sharing, and improved capacity to manage a pandemic at national and regional levels. These networks, facilitated by UNSIC, proved enduring upon the emergence of H1N1 and improved coordination of efforts to respond to the 2009 pandemic. UN organizations have strengthened their capacity for risk analysis, prediction, prevention, preparedness and control of zoonotic threats.

Case study: Egypt

1 The Government of Egypt (GoE), in partnership with the UN System and other development partners, is working to address H5N1 as a development issue in a comprehensive manner to prevent transmission to humans and a potential influenza pandemic.

Highly Pathogenic Avian Influenza H5N1

2 The National Supreme Committee (NSC) for Combating Avian Influenza was set up in 2005 by the Prime Minister with rotational chairmanship. Members of the Committee include Ministers of Agriculture and Land Reclamation (MOALR), Health (MOH), Environment, and Local Development and representatives from Foreign Affairs, International Cooperation, Interior and Information, the Army and Police. The seven Governors of the worst affected governorates by AI are also represented as well as WHO, FAO and the UN Resident Coordinator's Office. The NSC exercises leadership over the coordination of all H5N1 efforts, ensures buy-in and harmonization of interventions, ensures development of appropriate policies and ensures those policies are science-based and developed with consensus from all relevant sectors.

Whole of Society Approach

3 Roles and responsibilities of all concerned sectors were identified. The government involved and supported the sub-national level in the planning process. All governorates prepared regional plans. Reporting and response instruments were established and developed by the Information and Decision Support Centre under the Prime Minister's Office, adopted by the General Secretariat of the Presidency of the Council of Ministers, and sent to all relevant actors. The plan of Minufiya governorate was taken as a planning model for other governorates. The Information and Decision Support Centre provided support to all governorates during the preparedness phase. A sub-committee was formed to design training and simulation exercises to test ministry and governorate plans, examine policies and procedures, and roles and responsibilities of different directorates, and identify gaps in plans. Simulation exercises were carried out in the Ministry of Health and 8 governorates. Plans were reviewed and updated by all governorates

Business Continuity Plans

4 Two workshops were held on measures to be taken by government and private sectors to ensure continuity of service during a pandemic. These were attended by government institutions, civil society, and the private sector. 5 All ministries providing critical services established plans to ensure the continuity of their work during the epidemic. Those plans were presented to the National Committee for the management of crises and disasters.

Coordination and cooperation with civil society organizations

6 Coordination with the Egyptian Red Crescent in preparedness and response was done at the beginning. The government established a forum to identify the role of civil society organizations in the management of the crisis of pandemic flu A/H1N1.

Pandemic Influenza A (H1N1)

7 To respond to the H1N1 situation in 2009, the GoE activated the national preparedness plan and set up a multi-sector Crisis Management Committee led by IDSC that met regularly to provide a rapid response as the pandemic situation evolved. The Committee sent reports regularly to the Prime Minister's Office with clear action points to be taken by each sector. The Committee issued regular press releases through the media to the public highlighting the situation and prevention and mitigation measures that people could take and briefing them on government measures.

8 The Ministry of Health (MOH) received the Committee's full backing and support, including policy and advocacy support as well as allocation and mobilization of resources, to implement interventions coordinated with other national and international stakeholders. Surveillance activities were enhanced leading to successful decision-making regarding preventive and mitigation measures. A standardized severity index for pandemic and public health threats was also developed. Lab capacity at central level was strengthened and five sub-national laboratories were upgraded. Other interventions included ensuring an adequate stockpile of equipment and supplies; designating specialized hospitals to treat patients; developing plans for hospitals and enforcing infection control measures. Pandemic preparedness efforts over the past five years - including tools, guidance and partnerships - enabled Egypt to respond more effectively to the pandemic. However, gaps were also identified, especially regarding the H1N1 vaccine campaign. The procured amount of vaccine was not enough to cover initial needs and later rumours about H1N1 vaccine affected uptake of the vaccine by the public as well as by health professionals.

Communication Strategy

9 The Information and Decision Support Centre prepared a "Guide for the Governorates" on how to prepare plans for confronting the pandemic. The Committee for Management of Crisis of the Pandemic Global Influenza issued 189 reports to follow-up the H1N1 situation. Those reports contained information on: situation in Egypt, follow up and response by the ministries, evaluation of community reaction towards the crisis, global situation, and recommendations to reduce the impact of the disease. Media statements were distributed to all international media and the newspapers containing information on: global and national situation, public opinion about the crisis, and responding to enquiries and comments raised by the media and rumours. A Monitoring and Observation Centre was tasked to carry out 24 hour monitoring and analysis of what is going on in various information media and monitor the key messages and concerns raised by the media and the public and respond to them.

Learning from the experiences of Egypt

10 The challenge now is ensuring the shift from emergency response to a long-term development and risk reduction strategy. Egypt's commitment to joint working by animal, human and environmental health disciplines within the context of a One Health Approach is appropriate to involve a broad range of sectors in tackling existing and emerging diseases.

11 Egypt's pandemic preparedness experience provides lessons on how to advance "Whole of Society" planning for uncertain threats. The role played by the IDSC in providing a platform for engagement of all stakeholders including civil society, academia and various governmental entities proved effective in coordinating and facilitating pandemic response and creating the conditions for joint actions. Defining a command and control structure for the emergency and determining appropriate information flow facilitated decision-making and implementation including allocation and mobilization of resources and assignment of duties and responsibilities.

12 The challenge is now to turn stronger cross-sector working into institutionalized, sustained and holistic approaches to deal with other emerging zoonotic diseases and public health threats. Egypt needs to strengthen its institutional frameworks, incorporate tools into wider risk reduction frameworks, build on existing mechanisms and coordination platforms, and maintain public and political interest in the face of changing perceptions and needs. This will require that risk reduction strategies are integrated and aligned, community and industry partners are engaged and long term investments are made in animal and human health and their delivery systems at local levels.

Approaches in South East Asia: Within ASEAN countries, there are a variety of national mechanisms established to manage whole-of-government planning. These are sometimes "two-tier" structures, where a national disaster management agency is functioning under a key government official. In Singapore and Malaysia, efforts are aligned under national security structures, but are primarily health-led. In the Philippines, a National Disaster Coordinating Council falls within the auspices of the Office for Civil Defence. In Thailand, the Ministry of the Interior has assumed responsibility. In Indonesia, the Coordinating Ministry for People's Welfare has taken the lead role. In Cambodia, efforts are led from the very top of government, by the Prime Minister, through the National Committee for Disaster Management. In Vietnam, the Prime Minister assumed a very prominent role, galvanizing efforts around economic and livestock losses, as well as public health implications.

Uganda: Case Study

1 WHO is working with the Office of the Prime Minister (OPM) and the Ministry of Health (MoH) to implement activities to build whole of society pandemic readiness. OPM through the Ministry of Relief, Disaster Preparedness and Refugees is responsible for government planning. This Ministry coordinates preparedness and response programmes and activities related to all disasters. The Ministry of Relief, Disaster Preparedness and Refugees is the Government's focal point for disaster preparedness, and the lead actor on preparedness in Uganda.

2 The OPM carried out 3 simulation exercises; and awareness sessions with Ministries on business continuity and key roles in disaster preparedness and response in case of pandemic or other mega catastrophes. OPM in collaboration with the MoH organized a Capacity Building Workshop on the Whole of Society approach and Business Continuity Planning in September 2010. The objective was to contribute to a multi-sector national preparedness and response capacity through introducing the WOS approach and BCP in key sectors, including public and private sector organizations and essential services. The workshop was attended by 43 participants drawn from various Ministries and civil society organizations. The critical roles and responsibilities of different stakeholders during pandemics and other major disasters were better understood. The process of developing sector Business Continuity Plans was initiated – beginning with the Health and Security sectors.

3 A Coordination Committee in Pandemic Preparedness has been put in place to coordinate pandemic preparedness. A National Taskforce for Pandemic Influenza was created during the 2006 avian flu threat and was strengthened when H1N1 appeared. With its members meeting once a month, the taskforce initially focused on the animal and human health sectors and did not include other sectors and ministries. However, after the September 2010 workshop, the National Taskforce recognized the limits of a health-only approach and started involving other sectors, including academic institutions. Inclusion of other sectors brought a lot of

strength. As the Ministry of Health (MoH) does not have the mandate to coordinate other sectors, the OPM will lead response to any pandemic while the MoH will be a technical adviser agency.

4 Key lessons are:

- If you want to achieve clear and tangible results in health emergency matters, involve all sectors for: (1) many indicators on health are outside the health sector; and (2) the health sector does not have the mandate to coordinate other sectors in the event of a health emergency that affects other sectors.
- Sector BCPs in pandemic are highly important and can be used for other epidemics.
- Awareness-raising is extremely important: the whole-of-society training workshop created awareness among key stakeholders.
- Multi-sector and multi-stakeholder initiatives are valuable: the whole-of-government approach strengthened coordination.

5 Most aspects of the Whole-of-Government approach are very useful and need to be extended to other threats, health and non-health. The Whole-of-Government approach triggered discussions on how to improve response at the National Platform for DRR, policy change and implementation at parliament and cabinet levels, and strengthening OPM leadership.

Approaches in the United Kingdom: The UK influenza pandemic preparedness plan was developed by the central government in 2002 and underwent subsequent iterations upon testing in simulation exercises. The refined plan, described in *Pandemic flu: A national framework for responding to an influenza pandemic*, preceded the 2009 outbreak of H1N1 in the UK and enabled a coordinated response across the four nations comprising the UK and 14 overseas territories. Independent review of the 2009 UK H1N1 outbreak response deemed the UK's efforts to be highly satisfactory, with planning that was well-developed, personnel who were fully prepared, scientific advice that was expert, communication that was excellent, and public health service providers and suppliers who were splendid. The UK has produced the Cabinet Office National Risk Register of Civil Emergencies to assist public, private, and voluntary sector organizations and businesses improve their ability to respond to a civil emergency. The Register outlines the high consequences of hazards facing the UK, including pandemics, and provides critical information on how Government and Emergency Responders are planning for these threats. The Register also provides information on how the government assesses potential risks and what the public can do to help reduce casualties, damage to property, and disruption of essential services.

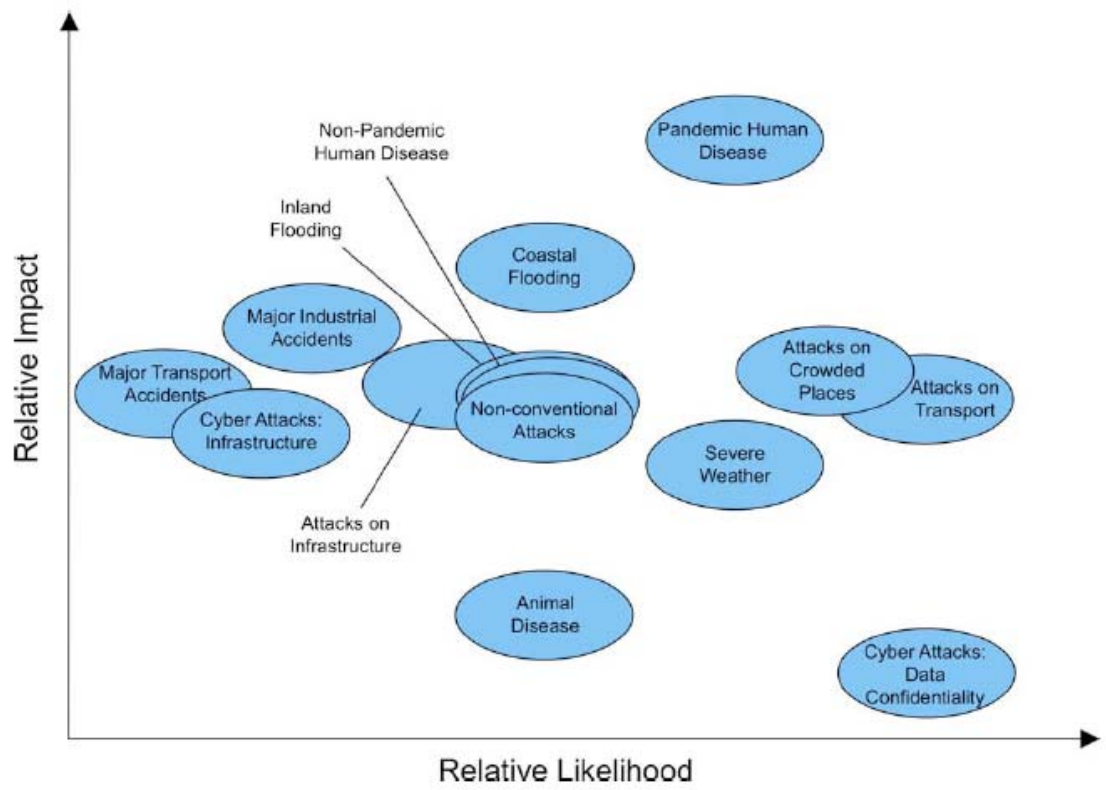


Figure 1: An illustration of the high consequence risks facing the United Kingdom

National Risk Register of Civil Emergencies

3 Lessons learned

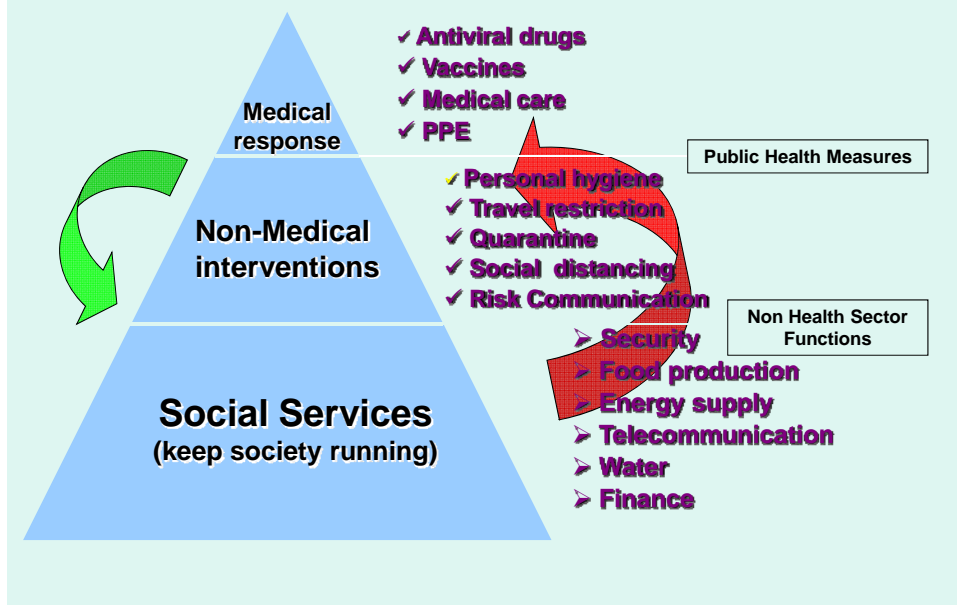
A number of lessons have been learned from multi-sector whole-of-government coordination and planning over the past 4 years.

Strong national strategy: Developing a strong national strategy from which all other activities stem is key to a coordinated response. A solid national strategy ensures that subsequent structures and processes are harmonized, coordinated and aligned. A detailed preparedness plan is key to quick decision making in the face of an epidemic. National ownership of the strategy is important, as well as high-level political leadership. If the national strategy is endorsed by the Head of Government and managed at Ministerial level, it helps to ensure that multi-sector coordination structures working under these levels draw in all stakeholders in an inclusive process. Pandemic preparedness policies should be consistent with the all-hazards approach advised for BCP and sufficiently generic to be incorporated into national emergency strategies to ensure sustainability and periodic review as national disaster preparedness plans are exercised.

Platform and focal agency: High level politicians should provide a platform for the engagement of all stakeholders including civil society, academia and Government entities to coordinate response and create conditions for joint actions. A lead focal agency needs to be appointed to coordinate the collaboration of sector agencies. The focal agency should be given the mandate to command, control, coordinate and communicate with sector agencies and the public. It is crucial to designate one sole body that is responsible to lead and coordinate the implementation of the plan in coordination with stakeholders and at all levels of administration. It is critical that there is a national command-and-control system to enable decisive decision-making, galvanizing of resources and assignment of duties across government to respond quickly to an outbreak - a seamless process where decisions can be implemented by operational agencies with a clear understanding of the policy intent.

Whole of Society readiness: The “Whole-of-Society” concept calls actors across all sectors of society to assume critical roles to generate a cohesive approach. In the event of a crisis, the national government should provide overall coordination throughout the country, while the health sector provides critical information on the progression of the pandemic or infectious disease to central government that will ultimately be communicated to the public through civil society organizations. Non-health sectors have the responsibility of maintaining their essential operations to reduce the economic, health, and social impact of a loss of their services. Individuals and families must take actions to reduce the spread of disease by adopting hygiene techniques.

Pandemics: Business continuity planning



WPRO/WHO

Strengthening the health sector: In Mozambique and Uganda, the health sector working with other sectors and sharing tasks according to expertise strengthened the response to H1N1 by galvanising commitment on the part of different Ministries to play their role in responding to the outbreak. Many outcomes and impacts of a health emergency are beyond the capacity of the health sector to deliver. The health sector does not have the mandate to coordinate other sectors in the event of a health emergency that affects other sectors. The Ministry of Health cannot oversee and resolve all issues that crop up during a disease outbreak. Its priority should be to provide the medical response. WHO calls for the health sector to provide reliable information on the progression of the outbreak, maintain quality of care for those utilizing the health system, institute mechanisms to prevent the disease from spreading throughout the community and health facilities, and provide protection and support to the health workforce.

Identifying critical interdependencies: There must be an iterative process to tap subject matter expert knowledge from different sectors/Ministries so that interdependencies among agencies are identified. Sector experts can anticipate the upstream and downstream impact of any Government action, given their close involvement in day-to-day operations.

All-hazards approach: An all-hazards approach uses the same set of management arrangements to deal with all types of hazards. In many organizations, the approach to dealing with operational risks is stove-piped, with different entities having responsibility for different hazards. As a result each group has its own priorities, separate resources are used to address each problem, and there is limited coordination. Yet, while each threat may seem different, when one takes a closer look at how events evolve, there is substantial similarity; a pattern or “recipe” for disaster emerges. Core response management systems are similar for all disaster types. It reduces confusion if all responses have the same basic organisation. This calls for the adoption of a single “all-hazards” approach, a process that is holistic and systematic in nature. Business continuity planning should, as a matter of good practice,

follow an all-hazards approach and is suitable for a broad range of possible disruptions no matter what the cause. An all-hazards approach encourages a more sustainable planning framework that doesn't depend on the highly uncertain risk of a pandemic and is more easily incorporated into standard operating procedures. To sustain health system preparedness, efforts have to go beyond pandemic to include any incidents that could create a health system crisis. Emergency preparedness plans that include pandemic contingencies will be easier for organizations to maintain and test during the long intervals between pandemics severe enough to trigger those plans.

Simulation exercises: Simulation exercises are encouraged, as a necessary validation and review of plans. Simulations and related learning at organizational, community and national levels have improved relationships. Simulation exercises build awareness of the breadth of the impact of a pandemic. Simulations, workshops and training engage stakeholders in shaping plans and build commitment and support for implementation.



IMC PREPARE workshop, Cambodia

5 types of simulations have been described by WHO guidelines:

- Orientations are the simplest exercises. They are run by the author of the disaster plan and introduced to groups of stakeholders who may assume certain roles during a crisis
- Drills focus on an aspect of an emergency plan that can be tested through exercising. Drills help stakeholders develop skills.
- Table-top exercises (TTX) present disaster scenarios for key stakeholders in a low-pressure setting. TTXs tend to be low cost, but effective in

identifying weaknesses in plans and providing feedback for areas needing improvement.

- Functional exercises facilitate a “real response” by activating command centres and documenting decisions made. These exercises are more expensive than TTXs and require a greater degree of coordination.
- Full-scale exercises are trial runs of action plans, simulating a disaster in the most interactive manner to test the operational capability of emergency response and management systems. These exercises require a significant commitment of resources.

District level planning: The H2P project found that working on the development of plans at district level can build pressure from district to province and provide an entree to work on provincial level planning. Engaging communities and districts in planning helped create bridges between national actors and districts.

Flexibility in planning: Plans must be flexible to implement because there are many unknown variables in pandemic planning. The extent of measures that we should implement to mitigate a pandemic depends on when a pandemic occurs, the virulence of the virus and how many people could be infected. These unknown variables mean that no country can have a fixed set of pandemic response plans because no plans can comprehensively cover every possible scenario. Planning for different pandemic scenarios enables agencies to develop a spectrum of responses that could be applied from a mild to severe pandemic. Responses can then be flexible depending on how a pandemic unfolds. Having a menu of flexible measures that agencies can implement enables governments to adapt quickly as better understanding of the pandemic emerges over time.

Schools: Schools can be a key avenue for disseminating information on prevention and sustaining preparedness. Children can be given information to share with their parents and influence them to take the necessary steps. Child-to-child programmes at both primary and secondary schools can be used to present information. Volunteers can work with schools and present information on prevention to health classes. Teachers can be trained at the elementary school level to create classes where children create plays and learn computer skills while researching the topic. Teaching the principles of risk reduction and preparedness in schools as part of health and history curricula can help to institutionalize the knowledge.

Engaging the public: Engaging the public is a key cornerstone of pandemic preparedness. The public needs to know what to do and be prepared for tough measures. If the public knows the measures that individuals can take to protect themselves, they can help themselves and their family, and play their part in the national response. Being prepared for tough measures such as school closure means that members of the public can make their own preparations. The public plays a vitally important role in responding to a pandemic. The best plans will fail unless the public support the plan and are able to work in tandem with government agencies. Public support and participation are of paramount importance to the success of public health protection. Emphasis should be placed on keeping the community abreast of health risks by means of wide publicity and public education campaigns. Risk communication strategies should be set up to reinforce communication networks with different sectors for timely and effective risk communication during pandemic

Financial incentives: A small fund was established by OCHA under the UNSIC Central Fund for Influenza Action to enable UN Resident Coordinators to bid for seed resources to kick-start national multi-sector pandemic planning processes. DFID and USAID supported this facility. This potential finance incentivised UN country teams to engage and stimulated greater activity. Money proved a critical driver of enthusiasm in resource-poor countries. Funding multi-sectoral projects can motivate institutions to coordinate among themselves, (as for example with World Bank funding in the Dominican Republic.)

Private sector engagement: In recognition of the need to involve all sectors of society in response to a major disaster, countries should increase their level of engagement with the private sector. This engagement should include all aspects of disaster preparedness planning and define appropriate roles for this sector in disaster response operations. Particular emphasis should be paid to those organisations involved in the provision and maintenance of essential goods and services, e.g. energy, transport and food processing. Objectives include to get them (i) to develop business continuity plans so they continue to operate during a pandemic and (ii) involved in the national response (e.g. agreement to use their properties for quarantine purposes or to sign up as a designated clinic for treatment of patients).

Case Study: Roles of different Ministries in Whole of Government approach to H1N1 in Vietnam

1 Numerous Ministries/sectors were engaged in responding to the H1N1 pandemic.

Ministry of Health

2 MoH delivered reports on pandemic prevention and control measures to the Central Party Secretariat, the Prime Minister, the Central Party Office, and the Government Office. MoH reported on the pandemic situation in the world to the public and the media; and worked with the media to promote prevention and control measures. MoH developed and implemented the National Action Plan for Influenza A(H1N1) Pandemic Prevention and Control; and instructed leaders of provincial and municipal people's committees to hold meetings of their Steering Committee for Human Influenza Pandemic Prevention and Control to implement pandemic-related interventions.

3 MoH provided direction to departments of health, preventive medicine centres and hospitals for controlling the pandemic. MoH supported localities with medications, chemicals, specialized materials and personal protective equipment.

Ministry of Foreign Affairs

4 The Ministry of Foreign Affairs coordinated with MoH to disseminate information on the pandemic situation to international embassies in Vietnam as well as Governments of other countries to ensure information sharing about H1N1 in Vietnam, to harmonize actions with other countries and the international community, and to help minimize the socioeconomic impact of the pandemic in Vietnam. The Ministry of Foreign Affairs was responsible for directing passenger entry and exit and international communications to ensure no adverse impacts on diplomatic activities between Vietnam and other countries.

Ministry of Public Security

5 The Ministry of Public Security coordinated with MoH in conducting isolation of suspected patients; providing a list of people coming from outbreak areas so that their health status could be monitored; and monitoring the pandemic situation to prevent inaccurate communications from causing public concern. The Ministry worked on border health quarantine and immigration.

Ministry of Information and Communication

6 The Ministry of Information and Communication regulated the dissemination, communication and promotion of the situation through the media, and communicated with international organizations to prevent negative impacts on socio-economic activities, international exchanges, tourism, and public opinion. The Ministry kept the public updated on the global and national situation and prevention and control measures through mass media broadcasts.

7 The Ministry provided prompt reports to the National Steering Committee when urgent interventions were needed.

Ministry of Defence

8 The Ministry of Defence coordinated with MoH for land border quarantine, and provided communications about prevention and control measures for people in remote and mountainous areas. The military coordinated

with local health authorities regarding establishing field hospitals, and established task forces and mobile rapid response teams to support localities in emergency care, admission, and classification of patients.

Ministry of Finance

9 The Ministry of Finance allocated funding for pandemic prevention, control, response, treatment and isolation.

Ministry of Transportation

10 The Ministry of Transport implemented health screening and surveillance using public transport to help with detection and isolation of suspected cases. The Ministry coordinated activities among transport units to support health units in transporting patients and relief supplies under the direction of the Chair of the National Steering Committee for Human Influenza Pandemic Prevention and Control. To help ensure staff safety and continuity of services, the Ministry of Transport gave instructions to agencies and the Department of Health on applying protective measures for staff who might be at high risk of contact with passengers infected with H1N1.

Ministry of Industry and Trade

11 The Ministry of Industry and Trade assigned staff to be on duty on a rotating basis to maintain human resources as stand-ins for ill staff to ensure people's essential daily needs such as power and water were met, and to increase stockpiles of food, fuel and essential equipment to ensure the availability of adequate supplies. The Ministry of Industry and Trade coordinated with MoH to promote the production and import of medical equipment for responding to the pandemic.

Ministry of Education and Training

12 The Ministry of Education and Training coordinated with the health sector in communicating about outbreak prevention and control measures, and encouraging pupils and students to share information with others in the community. The Ministry implemented enhanced health monitoring for students at schools through timely notifications to local health authorities as soon as suspected H1N1 cases were identified at a school. This allowed response measures to be undertaken if necessary, closing schools temporarily to avoid transmission in the community.

The Government Office

13 The Government Office coordinated with MoH to deliver regular reports to the Prime Minister on the situation. Advice was provided to the Prime Minister on allocating resources for pandemic preparedness and response working with the Chair of the National Steering Committee for Human Influenza Pandemic Prevention and Control.

Mass Media Agencies

14 The "Nhan Dan" newspaper, Vietnam News Agency, Vietnam Television, and the Voice of Vietnam, as members of the Communication Sub-committee, and other press and news agencies coordinated with MoH to provide updated information about the pandemic situation and prevention and control measures through mass media channels.

Vietnam Red Cross National Headquarters

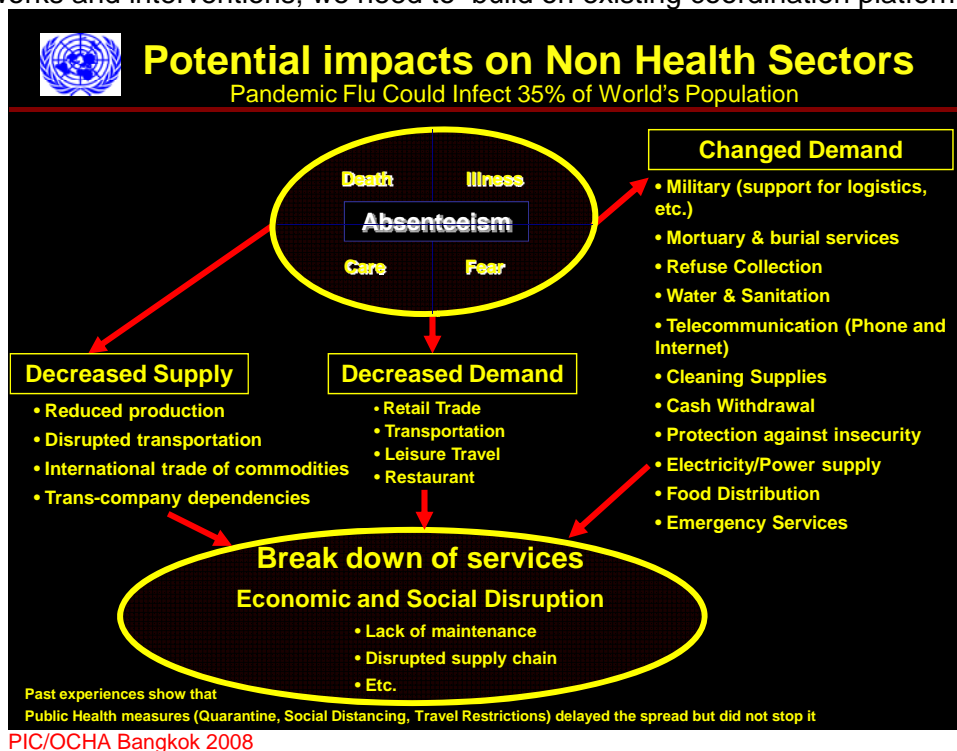
15 The Vietnam Red Cross deployed mobile relief workers to support health units in transport, admission, and emergency care of patients. It distributed information to people in the community to promote detection of suspected cases and application of preventive measures. The Vietnam Red Cross coordinated with international organizations to support Vietnam with protective equipment and materials and facilities for emergency care, transport of patients and field hospitals.

16 Similar arrangements to those used in response to Influenza A (H1N1) will be utilized when any new potentially serious pandemic agents threaten Vietnam.

4 Critical gaps

Weaknesses remain in whole-of-government planning that should be addressed.

Sustaining multi-sector working: A challenge is to turn the beginnings of cross-sector working into institutionalized, sustained, holistic approaches to deal with emerging zoonotic diseases and public health threats. A long-term investment is needed in public and animal health; we need to ensure involvement of civil society and the private sector at all stages; we need to incorporate pandemic preparedness tools into wider Disaster Risk Reduction frameworks and interventions; we need to build on existing coordination platforms.



Political mandate for multi-sector activity: Few government agencies have a political mandate to work across sectors. Each sector and line ministry tends to establish its own goals and indicators for which it is accountable. A “silo” effect tends to prevail. Sometimes these silo arrangements are underpinned by legal mandates, which further challenge the scope for inter-sector and inter-Ministerial work. To overcome this, it is necessary to persuade government officials and parliamentarians at high level that multi-sector coordination is of benefit to all, and to advocate for the establishment of related mechanisms and plans. It may be necessary to strengthen decrees, regulations and laws. Establishment of national commissions or national committees to address multi-sector issues in many countries requires an executive order or parliamentary decision.

Gaps in national pandemic plans: London School of Hygiene and Tropical Medicine surveys of national plans demonstrate that many national plans give insufficient attention to continuity of essential services beyond health, and that there is a correlation between adequacy of national planning and GNP per capita. The experience gained from the global response to avian influenza and the 2009 H1N1 pandemic has led to a greater appreciation of the need to formulate a comprehensive approach to pandemic preparedness that extends beyond health systems and incorporates key sectors across society. There is growing understanding of the importance of multi-sector planning, but investment and policies have not yet matched the need. Multi-sector national action plans, supported by international agencies and NGOs, often do not reach grassroots levels effectively and cannot be

implemented at local levels. There is insufficient preparedness for the non-health impacts of a pandemic in poor countries. In many countries, the non-health sectors have lagged in making progress in developing continuity plans and are not prepared in the event of disruption of supplies and services. We were lucky the pandemic was mild, as the world is not sufficiently ready to cope well with the impact of absenteeism on essential services that do not have business continuity plans.

Civil society organisations are not sufficiently consulted and engaged in national planning in many countries. More work is needed to involve more civil society organizations in national and local government planning. This work should include not just collaboration with Red Cross societies but a much larger group including faith based organizations.

Many national plans are weak on specifying non pharmaceutical interventions for pandemic. Some countries express the need for more information on how to respond appropriately at different levels of disease severity. Global guidance on the use of NPIs at community level and the nature of appropriate response given the severity of an influenza pandemic remains to be developed. WHO guidance is not detailed enough on home care and NPIs at a community level. Guidance should also address the common misapprehension that NPIs and PIs are somehow alternatives. The H1N1 pandemic showed the definitions used to describe the severity of the pandemic did not offer enough flexibility.

Several countries have placed emphasis on containment in their preparedness plans and emphasized actions in the first weeks of the pandemic and give less attention to actions beyond containment and after the first wave. Containment may not be effective in a severe pandemic or similar event, so more attention is required to what happens if containment fails.

Mainstreaming and integration: In the aftermath of a mild pandemic, donors have understandably lost interest in pandemic preparedness. It is likely that the strength of pandemic networks in development agencies and poor country partners will wane. If there was a severe pandemic in 10 years time, we would not be so well-placed in terms of pre-existing networks and preparedness plans as we were in April 2009. There is no longer an appetite for pandemic-specific planning. In order to sustain progress, we need to advocate an all-hazard approach. We should stress the generic nature of emergency planning for all hazards. We should press wider multi-hazard emergency preparedness actors, plans and processes to recognise that pandemic is one of the risks that they need to embed into their agendas. The mandates of many disaster management agencies do not include pandemic, and need to be broadened to take in a full range of risks and consequences. There is a difficult balance to strike between delivering preparedness that strengthens resilience to a range of threats without losing the pandemic-specificity that enables preparedness measures to be genuinely fit for purpose in a pandemic.

Case Study: Singapore

1. Singapore started multi-sector pandemic planning in 2004. One lesson is plans must be flexible to implement because there are many unknown variables. The measures we should implement to mitigate a pandemic depend on when a pandemic occurs, the virulence and how many people could be infected. These unknown variables mean that no country can have a fixed set of pandemic plans because no plans can cover every scenario.

2. The Singapore government developed a broad national response strategy that involves health and non-health sectors. The national response plan is fine-tuned as new lessons are learnt and discoveries are made about possible viruses and new technologies..

Why and How to Initiate Multi-Sector Pandemic Planning

3. On 1 Mar 2003, a young woman was admitted to Tan Tock Seng Hospital in Singapore after her chest X-ray showed white cloudy patches covering part of her right lung. Over the next few weeks, people around her started falling ill - family members, healthcare workers and other patients in the same ward. No one knew

anything about the disease, except that it appeared very infectious and healthy people were reduced to weak shadows of themselves in days. On 12 Mar 2003, the World Health Organization sent out an alert about an atypical pneumonia. Three days later, WHO named the disease Severe Acute Respiratory Syndrome.

4. The SARS outbreak was initially deemed by the Singapore government as a public health problem to be dealt with solely by the Ministry of Health. SARS Intensive Care Units were swiftly designated at Tan Tock Seng Hospital and doctors and nurses from other hospitals were roped in to help. But Singapore soon found that they had a much bigger problem on their hands. On 19 April 2003, several members of a family were reported sick and all cases were linked in some way or other to the Pasir Panjang Fresh Food Wholesale Centre. It was the first time that the virus had broken out of the hospital cordon. It was estimated that over 2,400 people could have come into contact with the index case at the wholesale centre. There was no other option: Singapore closed down the wholesale centre, tracked down the close contacts and put them on home quarantine. They had to do it fast. By 10.30 pm that night, the wholesale centre was shut down.

5. The Singapore government soon realized that non-medical mitigating measures had to be implemented. If the Ministry of Health were to take on the responsibility for implementing non-medical measures, then it would be distracted from managing patients with SARS. Singapore decided to activate the national crisis management system. The Homefront Crisis Ministerial Committee was convened to set policies to manage the crisis. The Homefront Crisis Executive Group was convened to coordinate the implementation of measures by government agencies. The Singapore Police Force were called in to cordon off the wholesale centre, the Singapore Civil Defence Force helped serve home quarantine orders and the People's Association, (a network of community-based organizations), helped with contact tracing. The National Environment Agency and the Agri-Food and Veterinary Authority were roped in to clear out the rotten stocks and to disinfect the premises. The wholesale centre was closed for 14 days from 20 Apr to 4 May. 70 percent of the supply of fresh vegetables in Singapore was disrupted. Singapore had to set up an alternative distribution centre so that lorries from Malaysia could still deliver vegetables to Singapore. On 30 May 2003, Singapore was declared SARS-free.

6. The SARS outbreak taught Singapore two lessons. The first is that there are both health and non-health issues that must be dealt with quickly so that the outbreak could be contained and its impact minimized. We cannot expect the Ministry of Health to be able to oversee and resolve all issues that crop up during an outbreak. Its priority should be to provide the medical response, such as administering timely treatment to all patients. This means that non-health issues such as enforcement of home quarantine orders, disinfection of premises and public communications should be handled by non-health agencies in close collaboration with the health ministry.

7. Secondly, it is critical that there is a national-level system to enable decisive decision-making and galvanizing of manpower and other strategic resources across the government to respond quickly to an outbreak. We also need a seamless process where decisions could be implemented by operational agencies with a clear understanding of the policy intent. The Homefront Crisis Ministerial Committee, chaired by Singapore's Minister for Home Affairs, is the dedicated national crisis policy-making body. This Committee is chaired by Deputy Prime Minister and Minister for Home Affairs. The Homefront Crisis Executive Group is chaired by the Permanent Secretary for Home Affairs and principal members include Permanent Secretaries from most Ministries and Heads of Departments.

8. The HCMS framework enabled the Singapore government to maintain oversight of critical and operational issues that needed to be dealt with by the relevant ministries and agencies during SARS. It ensured that the efforts of all agencies were coordinated and contributed to the overall goal of containing the virus.

9. In 2004, Singapore decided to push for a multi-sector approach in the planning and preparation for a human influenza pandemic. Singapore believed that planning and preparations should start early as an influenza pandemic could be more severe and prolonged than SARS. The first order of business was for all key Ministries and agencies to start planning for an influenza pandemic.

Lessons from Multi-Sector Pandemic Planning

10. Pandemic planning cannot be rushed. When Singapore first started planning, it used a scenario similar to that of the 1918 Spanish Flu Pandemic which had killed millions of people worldwide. Agencies were to develop plans based on these assumptions: 40 percent of the population are infected, up to 50 percent of employees are absent from work, medical treatment may not come in time and third-party service providers experience structural failure. When planning assumptions were explained to stakeholders, some asked: "If it is going to be so bad, we are all bound to die anyway. So why bother to plan?"

11. Singapore quickly realized it needed to take a more gradual approach. A planning scenario was designed based on the more moderate 1957 Asian Flu Pandemic and the 1968 Hong Kong Flu Pandemic, with the infection rate down to 20 percent. This was much easier for people to relate to. Emergency and business continuity planners could also identify tangible measures that they could implement to mitigate a mild

pandemic. Although the parameters stretched their existing plans, the agencies felt confident that their organizations and operations could cope. They started to revise their plans based on the parameters. After the plans were done, the agencies were confident enough to move on to planning for a tougher scenario where the virulence is higher and more people could be infected and die from the pandemic virus.

12. Another key lesson is that there must be an iterative process to tap domain knowledge so that interdependencies among agencies are identified. Domain owners could anticipate the upstream and downstream impact of any government action, given their close involvement in day-to-day operations. For example, teachers have highlighted that if schools were to be shut, parents would expect alternative ways of delivering lessons to their children. Schools would have to set up home-based learning programmes. They would have to depend on external parties such as the telecommunications companies and postal service for the delivery of education materials through the internet and postal mail. The more Singapore engaged the domain owners, the more people started to offer valuable feedback and inputs that were subsequently incorporated into plans. Tapping on each other's expertise and knowledge, Singapore studied the problem in detail and explored various options before deciding on a best approach.

13. Singapore also put the onus on the CMGs to engage private sector stakeholders under their domains whose services or resources are required for the national response e.g. property owners, transport companies and private medical practitioners. The engagement of these stakeholders is on two levels – (i) getting them to develop business continuity plans so that they continue to operate during a pandemic, especially a severe one, and (ii) getting them involved in the national response (e.g. secure agreement to use their properties for quarantine purposes and to sign up as a government designated clinic for treatment of flu patients).

14. At the industry level, the Ministry of Home Affairs Secretariat has worked with the Monetary Authority of Singapore and the Association of Banks in Singapore to strengthen the business continuity plans of financial institutions. An industry-wide financial sector exercise code-named Exercise Raffles II was conducted from 28 Aug to 11 Sep 2008. This exercise enabled financial institutions to test their pandemic plans and responses, and to align them with the broad national strategy. The exercise also tested the financial sector's ability to maintain essential financial services such as currency distribution and operations of national payment systems. In total, 144 financial institutions such as banks, finance companies, securities and broking houses and insurance companies participated in Exercise Raffles II.

15. To align the plans of the government and the private sector, the Government made publicly available several documents, including Singapore's national strategy - "Preparing for a Human Influenza Pandemic in Singapore"

(<http://www.moh.gov.sg>), "Influenza Pandemic Readiness and Response Plan" by the Ministry of Health (<http://www.moh.gov.sg>), and "Flu Pandemic Business Continuity Guide" for small and medium-enterprises (<http://www.spring.gov.sg>). Government agencies also conducted briefings for companies, each tailored to the nature and requirements of the business.

Engagement of the Public

16. Engaging the public is a key cornerstone of pandemic preparedness. The public needs to know what to do and be mentally prepared for very tough measures. For instance, if the public knows the basic measures that individuals can take to protect themselves, they can better help themselves and their family, and play their parts in the national response effort. Being mentally prepared for tough measures such as school closure also means that members of the public could make their own preparations e.g. child care arrangements.

17. Preparing the public does not mean constantly bombarding them with preparedness messages. Constant messaging could lead to fatigue among the public. Instead, Singapore opportunistically rides on the seasonal flu cycles to disseminate general health messages on good personal hygiene. The public is encouraged to "Be Flu Free". In April 2006, against the backdrop of avian flu outbreaks in Southeast Asia, Singapore distributed a Flu Pandemic Guidebook, written in all four official languages, to all households (1.1 million copies in 4 languages). The guidebook describes symptoms of flu, differences between bird flu and human flu, shares Singapore's plan to deal with a flu pandemic, and provides a list of precautions that Singaporeans could take, such as stockpiling medicine and food, keeping good personal hygiene, and managing sickness.

18. Multi-sector influenza pandemic planning is a long-term effort for Singapore. Apart from the importance of coordinating the effort across multiple sectors and having flexible plans, what has also been learnt is that the public plays a vitally important role in responding to a pandemic. The best plans will fail unless the public support the plan and is able to work in tandem with government agencies.

5 Recommendations

1. Strategies for pandemic preparedness should build on existing programmes in an all-hazard approach.
2. National Disaster Management Organisations should adopt pandemic as one of the threats for which they are responsible.
3. Pandemic preparedness tools should be integrated and aligned with wider disaster risk reduction frameworks.
4. Countries should develop business continuity plans across sectors to enable the continued operation of essential services.
5. Roles of key Government agencies in the event of a crisis should be defined.
6. Central coordination should be exercised through an inter-Ministerial committee, supported by a parallel committee of officials at working level – which should meet regularly.
7. Civil society, the private sector, academia and military actors should participate in national planning processes.
8. Inclusive multi-sector coordination structures should draw in all key stakeholders.
9. A lead focal agency should be mandated by the highest levels of Government to coordinate implementation of the plan.
10. A national system should be developed to enable robust decision-making and galvanise manpower and strategic resources across government.
11. Plans should be tested in simulation exercises.
12. Plans should be flexible, with a menu of possible responses.
13. Strategies should be developed to ensure timely and effectively risk communication.
14. Governments should build open, transparent and trusting relationships with the media to enable engagement of the press to disseminate critical information to the public.
15. Other regional organisations should consider the scope for replicating ASEAN's leading-edge approach to measuring progress in national multi-sector preparedness.

Annex A World Bank data on 9 countries whole of government planning

World Bank pandemic experts responsible for 9 countries provided the following assessment in response to a questionnaire we issued to World Bank staff in relation to whole of government planning. This provides a sense of where whole-of-government planning is at in-country in a range of different locations.

	Sri Lanka	Mongolia	China	Lao PDR	Haiti
How does the country define whole-of-government planning?	Addressing development goals in different perspectives of stakeholders attached to the problem.	Identifying what key functions need to be maintained in order to mitigate the impacts of pandemic influenza; Central Government should develop a strategic plan to guide the development of sector PPP's; Each concerned sector, entity, and household should develop PPP or contingency plan and test before pandemic happens.	Identifying what key functions need to be maintained in order to mitigate the impacts of pandemic influenza; Central government should develop a strategy to guide the development of sector PPP's; Each concerned sector, entity and household should develop a PPP or contingency plan and test before the pandemic happens.	The National Emerging Infectious Diseases Coordination Office (NEIDCO) understands the importance of whole country planning.	No official multi-sectoral definition of planning. The ministry of agriculture (MARNDR) and ministry of health (MSPP) coordinate policy and activities.
Who is responsible for whole-of-government planning?	Ministry of Health, Ministry of Livestock, Ministry of Disaster Management Ministry of Finance, Ministry of Education, Development Partners	Premier is responsible for the response to pandemic influenza. He is chairing the multi-sectoral committee; National Emergency Management Agency (Ministry) is the leading agency for PPP; Government at each level has an equivalent structure.	Vice Premier is responsible for the response to pandemic influenza. He is chairing the multi-sectoral committee; State Council has an Emergency Response Office for whole of government planning; Government at each level has an equivalent structure.	NEIDCO has responsibility for overseeing activities related to non-natural disaster and health related planning.	The Prime Minister
What are the key achievements in whole-of-government planning?	Joint Technical committee for Influenza co-chaired by Director Generals of animal production & health and Health Departments was established. The committee meets monthly and includes ministry technical	Establishment of the government-led vertical emergency response system; The strategic plan for pandemic preparedness and response has been drafted and will be issued early this year; Sector specific plans have been developed under the AHI Project funded by GFAHI in project counties;	Establishment of the government-led vertical emergency response system; The strategic plan for pandemic preparedness and response has been drafted and will be issued early this year; Sector specific plans have been developed under the China AHI Project funded by GFAHI in project counties;	Pandemic planning has taken place in all provinces with Ministry of Health and other sectors. The UN is currently spearheading efforts at having key Ministries prepare disaster management plans as a pilot for future	For Avian Flu there has been coordination between MARNDR and MSPP; however, it is funded by "projects" and thus not systematic.

	officers, disaster Management Centre, and WHO. The field level awareness programs are conducted by both animal and human health parties.	Contingency plans have been developed for health facilities; Joint drills involving different sectors organized periodically; A total of 18 Joint Rapid Respond Teams participated by professionals from different sectors set at 6 priority provinces and cities.	All the health facilities have developed contingency plans; Business continuity plans have been developed by the enterprises responsible for food, electricity and water supply under the China AHI Project in project counties; Joint drills involving different sectors organized periodically.	planning.	
What exists now that did not exist 4 years ago?	One health approach of zoonotic disease control.				Engaging with the government on the issue of avian flu to be able to have multi-disciplinary teams supporting the project in order not to have too much bias or focus on the agriculture vs. the public health sector
What are the key lessons learnt?	Agencies understand the importance of looking at the problem in different perspectives as it addresses the issues which one party would not observe	Government should take the lead; Different sectors must work together, particularly at local level; Focus on priority provinces and cities that serve as epicenters of pandemic influenza; Preparedness works.	Government should take the lead; Focusing on the grass-root levels; Preparedness works.	Collaboration is time consuming but worth the effort.	
Did whole-of-government planning help to reduce the impact of H1N1?	Yes, the existing Joint Technical Committee, joint awareness programs, and preparedness programs developed targeting H5N1, the system was already aware of the methods in handling the	Mongolia responded effectively to the H1N1 pandemic between 2009 and 2010.	China has responded effectively to the H1N1 pandemic between 2009 and 2010.	The overall coordination office (NEIDCO) provided the necessary focal point for organizing activities within country during the pandemic.	Although Swine flu was found in a few cases, this only triggered a response from the health sector. No inter-institutional coordination was needed

	issue.				as there was no real threat to and from animals.
Has whole-of-government pandemic planning had collateral benefits?	It has assisted to understand the importance of looking at zoonotic diseases from both angles without which controlling is not possible and avenues have been opened to extend collaboration towards other diseases such as Rabies, leptospirosis and Brucellosis.	There are some generic capacities and technical components for either pandemic influenza or other EIDs. Improved PPP will help response to other disease outbreaks. Examples: helped in response to FMDs among animals, Newcastle disease outbreaks in UB.	There are some generic capacities and technical components for either pandemic influenza or other EIDs. Improved PPP will help response to other disease outbreaks. Examples: improved capacity helped Anhui Province in response to Cholera outbreaks in 2010, response to the cluster of plague cases in Qinghai; it contributed to disease outbreaks after Wenchuan earthquake and Yushu earthquake.	Having in place mechanisms which allow ministries to work collaboratively (Health and Agriculture) has had a positive effect on efficiency in responses to potential H5N1 outbreaks.	Collateral planing has helped with the swine flu and now with the cholera response in rural areas.
Is the country including pandemic preparedness in a multihazard approach?	Disaster management Center and other natural and man made disasters are included in multihazard approach	Multihazard approach includes: bushfire, drought, blizzard, hazardous chemical emission/leakage	Multihazard approach includes: flood, earthquake, bushfire, hazardous chemical emission/leakage, bioterrorism,	No multihazard approach.	No multihazard approach. Funding is mainly for specific threats such as cholera and avian flu. The agency on disaster preparedness does not get involved in human or animal health threats.
What salient gaps exist in terms of whole-of-government planning?	Lack of clear understanding of the layers that are not immediately connected to the issues	Preparedness, early warning/surveillance system, and joint rapid response teams	Preparedness, scale up of best practices, early warning/surveillance system, and multisectoral collaboration	Truly multi-sectoral/multi-hazard planning, agreed mechanisms for the agencies designated to oversee different threats to work together.	Medium to long term planning requires systematic development

	Colombia	Dominican Republic	Bhutan	Cambodia	
How does the country define whole-of-government planning?	Through the National Planning Directorate (DNP) and the national commission for food safety	No official multi-sectoral definition of planning. For Avian Flu activities the ministry of agriculture, and ministry of health, ministry of environment, and the private poultry producers have a committee to coordinate policy and activities.	Includes active participation from all relevant ministries	Cambodia's Comprehensive National Plan on AHI provides support to the two lead technical agencies (responsible for human and animal health) and establishes the coordination role of government and all other responsible agencies. There is also an MOU between Royal Government of Cambodia and UNDP.	
Who is responsible for whole-of-government planning?	National Planning Directorate	Ministry of Economic Development and Planning	The Disaster Management Unit (in the Dept of Local Governance) of the Ministry of Home and Cultural Affairs (MOHCA) lead disaster management efforts, as in response to the recent earthquakes. For AHI, Ministries of Health and Agriculture have established a National Task Force comprised of various Ministries and Organizations who will contribute to the implementation of the National Influenza Pandemic Preparedness Plan (NIPPP). A National Technical Committee was established which includes implementing level staff from both Ministries along with the head of the Disaster	The National Committee for Disaster Management (NCDM), Ministry of Health, and Ministry of Planning has overall coordination responsibility with support from UN agencies.	

			Management Unit of the MOHCA. When an outbreak occurred, they established a Command and Control Center which included key high level officials in both ministries and those leading the response on the ground to ensure a more agile response.		
What are the key achievements in whole-of-government planning?	The inter-governmental commission hold regular meetings on avian and human influenza. Development of a joint investment project to finance communications and joint response programs.	The execution of the avian flu project is an achievement in the multisectoral coordination and planning. The project is financed by the Avian Flu Trust Fund of the WB.	Overall coordination between the various sectors was so good that the Disaster Management Unit at MOHCA is adopting the same approach. A key achievement was the rapid containment of the 3 outbreaks they had.	NCDM, MOH and MAFF (Ministry of Agriculture, Forestry and Fisheries) multisectoral whole-of-government coordination capacity has been substantially upgraded through the AHI Control and Preparedness Emergency Project (AHICPEP) and other support. Examples include the increasingly effective responses to outbreaks of H5N1 over the last two years, the training of village health care workers (VHV) and Village Animal Health Care Workers (VAHW), and increased funding for FAO and WHO's more active engagement in pandemic preparedness	
What exists now that did not exist 4 years ago?	A joint action plan for coordinated response and coordination	Regular meetings of the intersectoral committee for planning animal	The Disaster Management Unit following a new approach based on the project.	Multi sectoral provincial pandemic planning and simulation	

	strategy.	and human related influenza threats.		exercises have been conducted and tested for 4 provinces. Integrating PRRP (pandemic preparedness, response and recovery program) activities into CBDRM (community based disaster risk reduction programs) have been disseminated and raised awareness in 23 provinces.	
What are the key lessons learnt?	For some time, beyond the information exchange and coordination meetings, there were no joint efforts and investments among ministries. Now there has been resources allocated for such joint work and so the preparedness is actually working on the ground.	Pandemic preparedness is time consuming process, but is crucial for long term impact in terms of coordinated support to the global population and animal producers.	That coordination is a process and is crucial to ensure effectiveness.	Multi sectoral Pandemic Planning and Simulation Exercise in Siem Reap. Concerned agencies and stakeholders have been invited to join locally and regionally. Key lessons learnt have been documented but not yet published.	
Did whole-of-government planning help to reduce the impact of H1N1?	Although Swine flu was found and a national emergency was declared by the Government, this only triggered a response from the health sector. No inter-institutional coordination was needed as there was no real threat to and from animals.		No, MOH was less prepared and worked on its own and some with the Ministry of Education.	Yes, the procedures established under AHICPEP have proven effective for responding to other types of influenza outbreaks including H1N1.	
Has whole-	No.	No.	Yes, it improved the earthquake	Yes, AHICPEP	

<p>of-government pandemic planning had collateral benefits?</p>			<p>response.</p>	<p>provides financial and technical support responding to threats in a variety of areas of animal and human health. Local Government is aware and has coordinated with concerned parties to train for other threats such as H1N1, cow disease, pig disease and vibrio cholerea.</p>	
<p>Is the country including pandemic preparedness in a multihazard approach?</p>	<p>It's a multihazard approach around food safety. It doesn't involve the disaster preparedness team that is only focused on natural (not human) disasters.</p>	<p>Limited to influenza threats. The disaster preparedness agency is not involved (only for natural hazards).</p>		<p>NCDM and Ministry of Planning includes pandemic preparedness as part of a multihazard approach including responses to disaster risk reduction such as floods, droughts, and other natural disasters</p>	
<p>What salient gaps still exist?</p>	<p>Disaster preparedness for human health issues beyond the scope of food security is necessary</p>	<p>The medium to long term planning requires systematic development, beyond the specific fund/projects</p>		<p>The key gap is the legal mandate for NCDM, MOH and MAFF. In principle, the concerned agencies and UN agencies agreed with the role of whole-of-government planning process, but no approved legal mandates have been adopted as yet.</p>	

Annex B List of key informants

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